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ART. I.—*Egypt and Mohammed Ali; or Travels in the Valley of the Nile.* By James Augustus St. John. In two volumes.—Vol. II. large 8vo. London: Longman, Rees, and Co. 1834.

IN our number for June, page 197, we have given a detailed account of the contents of the first volume, and we mentioned at the time that we should reserve the second volume for a distinct review. We proceed, therefore, to fulfil our task.

It will be remembered, that we have accompanied Mr. St. John in his ascent from Egypt to Nubia. Here he commences afresh his investigation of the ancient monuments, and takes occasion, in some instances, of comparing accounts of former travellers with the reality. He seems to be of opinion that no certain source can be assigned at present to account for the worship of the crocodile, which was so long an object of idolatry among the inhabitants of the Ombas, Coptos, Tachempso, and Arsinoe. Ignorant and savage nations, however, have at all times been prone to adore any object which they believed capable of conferring a benefit or inflicting an injury. By some nations the cow was adored from a sense of gratitude for the milk she bestowed; the crocodile, lion, and other savage animals, from fear, on account of the death they were able to inflict. Similar motives gave rise to the adoration of the serpent and all other obnoxious reptiles which superstition have deified. The idolatry which still exists in Hindoostan and other parts of India, is probably the original religion of the Egyptians; amongst whom the priests, even had it been their interest to have allowed them, saw it too far seminated and too deeply rooted to be overthrown. But it was more in character with their selfish dispositions to give it place in their system, in which a number of jarring creeds, adapted to the capacities of those for whom they

were intended, appear to have been thrown together. In the fear of the vulgar, the cow, the bull, the crocodile, the ichneumon, the cat, and many others, were worshipped as so many deities; whilst, on the other hand, the priests and the initiated, consider these as animated only by emanations of the universal soul, or despised them altogether. Such, at least, is the history of Brahminism of India. The establishers of the new religion, seeing that they could not subdue the attachment of the long established superstitions, in which the spirits of mountains, rivers, trees, plants, animals, and the generative and destructive powers, were venerated with rights and ceremonies, engrafted their own novel creeds upon the old system, and allowed both to flourish on the same trunk; but whilst the Brahmins allow the bull to be adored by the vulgar, as the representative of *Siva*, scorn to pay worship to it themselves. In like manner are all other animals regarded by the learned in India in their proper light; and this appears to have been the same with the priests in Egypt, by whom the god of the Ombites was considered only as the symbol of time, which, like that voracious animal, devours and destroys.

The examination of these ruins being accomplished, our traveller dropped down the river slowly, and landing at the foot of some eastern mountain, he found, what he considers, the most extensive quarries in Egypt, or, perhaps, in the whole world. In one of the temples near this place he paid particular attention to some paintings, which, though mutilated, still disclosed an interesting story. They seemed to have contained a pictorial history of events, or, rather, occupations, of one employed in rural business, such as reaping, winnowing, pulling and unbolling flax; fishes, fowling, and the many labours of the vintage. Tracing the series, he commenced with the second compartment, where he saw a carriage drawn by two horses as if waiting for its owner, with a groom on foot holding the steeds and curbing their ardour. Next occurs a company of reapers in a corn field, with sickles in their hands; where, in order to dispel any ideas of pastoral simplicity or rural happiness, is seen close behind, an overseer, brandishing a whip in his hand, like a negro-driver; the Egyptians being ignorant of any other excitement to labour but that of flagellation. The corn having been thrashed and winnowed in the field, as is at present the custom with the Arabs, it is conveyed in large baskets, hung on poles, and carried between two men, to the garner. Women are next seen following the reapers and gleaning up the scattered ears into small baskets. Then comes a large blank in the wall.

We must now imagine the corn safely housed, and preparations made for the feast of the harvest home. The commiseration of the President Goguet is excited at there being no mention made in the descriptions of patriarchal feasts in the sacred writings, of game and ragouts, and thence infers that such meats were entirely unknown in the remote ages. But the simplicity of the inhabitants

of Eilithyias was not so great, for we see the sportsman returning home from the chase with his bow and arrow in his hand, and a bag heavily laden with game slung over his shoulder. Now comes the feast. According to some historians, women in Egypt, as in Sparta, were accustomed to hold a complete ascendancy over their husbands, and to govern in a despotic manner both their houses and fortunes. But here we see both sexes, although situated at separate tables, on terms of equality; the male guests are sixteen in number, and are seated on chairs on one side the apartment, whilst the females, likewise sixteen, occupy the other. The master of the feast is seated on a throne at the upper end of the room, and beside him, on the same seat, is his wife, whose right arm is flung around his neck. Several domestics are standing before them awaiting their commands, together with two female musicians; the one seated on the ground and playing on a seven-stringed harp, which rests on her knees, whilst the other plays on a crescent-formed instrument of four cords, awkwardly held on the shoulder. On a large table covered with provisions, situated in the middle of a banquetting room, is a bull's head cooked with the horns on; and, beside it, a whole quarter of the animal: from this circumstance it is clear, that the Egyptians ate the relations of their god, Apis, although they might scruple to devour the deity itself; there are heaps of different kinds of fruit on the table for dessert. The men are attended by two female slaves, and have each a portion of the lotus plant in their hand, and appear very grave; but their more vivacious companions, who are attended by ten slaves, appear, in most instances, to have thrown their lotuses on the ground, and to be delighted with the music and song, laughing and clapping their hands. The hair of the females is smooth or covered with their head-dresses; whilst that of the master and male guests are twisted in small ringlets, after the modern Nubian fashion. The mistress of the feast is seated on her lord's left hand, whilst the other ladies being situated facing her, are, consequently, on the right of theirs. On the lower part of the picture, at present very much mutilated, are figures of cows and other animals; on the side of a niche, where there was formerly a statue in a sitting posture, but now broken into pieces, are several figures, of whom some are kneeling, and others playing on divers musical instruments.

We now arrive at a very different subject. The Thoth Psychopompos at length knocks at the rich man's door, to conduct his spirit to Amenti. He resigns his wife and home, and his soul, according to its deeds, migrates into a cat, a hog, a vulture, or an ibis, in order to accomplish in successive transmigrations the revolutions of the Great Year, whilst his body is given over to be embalmed, in order that it should be entire at its owner's return. The mummy, swathed and bandaged, is stretched upon a couch, with several female mourners, on their knees, weeping round it. The chest in which the mummy is to be conveyed to the place destined

for it, being brought in, and the body enclosed in it; being placed on a lion-shaped bier, the procession commences its march. A figure seated on a sledge drawn by men, precedes the chest containing the mummy; they arrive at the sacred river, where the coffin, mourners, and attendants embark in boats drawn along the shore by a cow,—the cord being attached to her horn,—several men assisting her. In an adjoining compartment we see a man with a globe on his head, seated on an urn, whilst two figures, which are probably priests, are pouring libations over him. Towards their left is delineated another person, occupied in cutting up an animal probably intended for the funeral feast, for the Egyptians invariably made merry at these funerals. In the third tomb the author observed in a niche, a man sitting between two women, supposed to be his wives; but the question is, did the Egyptians allow of polygamy? The scenes represented in this tomb resembled those above described, with a few exceptions.

Amongst the conclusions to which the author arrives respecting the Mohammedan religion, is this, that whatever be its effects on the hearts of the inhabitants, no one can hesitate to believe that its influence is very considerable on its manners and language. They scarcely ever speak of their intentions without the provisional expression, *inshalla*, or, please God. Mr. St. John informs us, that on arriving at Gournou, he found an English family actually living in an excavation in one of the tombs; this was a Mr. Hay and his family, whose politeness and gentleness of manners are so well known to all European travellers in Egypt. A Mr. Bronomi, an English artist of talent, inhabited a neighbouring tomb, in which he had remained for several years.

Upon the author's arrival, they very obligingly invited him to take his abode with them during his stay at Thebes, pointing out to him the inconveniences of his remaining in his randjia on the river, so far from the principal ruins, and the royal tombs of *Biban et Melook*. The author, influenced by their pleasing society, accepted their kind invitation, and removed the Hajji to the tombs. Their society here was numerous; for, besides the two gentlemen before mentioned, and Monro who was waiting for the author at Gournou, there were Mr. Catherwood and M. Dupuis, both artists, residing in the neighbourhood. Two other artists, Messrs. Gouri and Jones, were residing at Luxon, where Messrs. Welsted and Carlis, officers in the Indian navy, who had been nearly two years employed in making a survey of the Red Sea, had arrived a few days before. Mr. Arundale, the editor of Palladio, likewise joined them, from Déndera, in the course of a week. Thebes must have appeared more like an English colony, during their stay, than a deserted metropolis. They spent the day amongst the ruins; and the evenings, with greater part of the nights, in conversation; the majority of these gentlemen being persons of great talent and enlarged experience, the author was induced as much from this cir-

cumstance to prolong his stay at Thebes, as from the numerous monuments of ancient art there found crowded together.

Mr. St. John acknowledges that the conclusion to which he has come, materially differ from those of many other travellers, for whom, nevertheless, he entertained the greatest respect.

As it became necessary for him, under such circumstances, to investigate the causes of this discrepancy; he endeavours to explain it, by supposing that in every pursuit which men follow with eagerness, it generally happens that they ultimately investigate it with an undue importance, discovering beauties where others, occupied with different studies, see none at all. Such persons, entirely devoted to their favourite subject, neglect to make those discursive flights, healthful pauses, and numerous approximations and comparisons, without which it is impossible, even for the most acute minds, to form a correct judgment. The greater number of Egyptian antiquarians are placed in this situation; and many of those who may have been unbiassed by the pursuit of any particular study, appear to have surrendered their own judgments to the direction of that of others, by whose eloquence they have been fascinated. There are others again, whose sole pretensions being founded on their acquaintance with the practice and ordinary routine of the arts, who presume, without any other qualification, to decide on a question more connected with the abstract principles of all art, than with the traditional and manual processes in which the lives of such men are generally passed: besides the different intellectual characters of different men, must necessarily cause a great variation in their decisions. And it is on account of this, that, whilst masses of ruins have produced, in some travellers, the most extraordinary ecstacies, they have scarcely been noticed by others. He proceeds then to give a copious description of the sculptures and paintings of Thebes, and the style which he employs is entirely destitute of any technicalities, or, what may be more properly called—the jargon of connoisseurs—as the following extract will testify:—

"Several reflections, suggested by an examination of the sculptures and paintings of Thebes, confirmed me in the opinion I had already formed from the other monuments of Egypt,—that the Egyptians never proceeded beyond what may be termed the first step in the arts. The Greeks, when they embodied in bronze or marble, their conceptions of the numerous inhabitants of Olympus, appropriated to each divinity a set of features expressive of his character. And this type became to a certain extent traditional. Whenever an artist undertook to reproduce the figure of Jove, Mercury, Venus, or Diana, he was careful, therefore, to preserve the style of beauty which distinguished the deity he represented; but beyond this, he was bound to follow no model. The endless variety of nature being before him, he might aim in his work at clothing with a permanent form, ideas rivalling, or even surpassing, in majesty and beauty, the dignity of man and the softness and fairness of woman.

"441. The Egyptian artists, we are told, were cramped in their labours by legislative enactments; but they seem to have been far more

effectually cramped by incapacity: for, if we may venture to speak the homely truth, it is evident that, in these branches of the arts, they possessed neither taste nor genius. They were utterly incapable of expressing the character by the countenance. If the artist undertook to represent a goddess, he delineated, not a woman, but that stiff, awkward resemblance of one which his ancestors had invented; and this figure, until the mitre was placed on the head, might serve for Bouto, or Boubasta, or Athor, or Isis. There was not a shadow of difference. Nay, he might go still farther, and, by adding a beard, convert Isis into Osiris, or *vice versâ;* for they had but one face for all the gods and goddesses, men and women, if except that rude abortion of a divinity, whom we call Typhon. The attempts to represent portions of inanimate nature are still more imperfect. In the bas-reliefs of the great temple of Karnak, we observe forest trees fashioned like broom-handles, with leaves, broad as the trunk itself, stuck here and there upon the sides of it. Here, likewise, is a king advancing to the attack of a fortress, the walls of which are not up to his knee; or driving before him numerous diminutive figures of enemies, not a jot more like men and women than the Chinese masterpieces on cups and saucers. On the walls of Memnonium is a river-fight, in which the water runs up hill like a racehorse; while dead bodies are floating through the stream, with their elbows touching both banks, like a drunken man in a kennel, if we may employ so homely a comparison. The diameter of the king's chariot-wheels is at least twice the width of the river; and so enormous is his own bulk, in comparison with the puny race he is destroying, that, like Gulliver at Lilliput, he might easily put the one half of his enemies in his pocket. In the pages of some travellers, however, the Memnonian sculptures assume quite another aspect: their imagination and rhetorical artifices converting these rude creations of mediocrity into performances of singular merit, after the romantic manner of Ktesias, who, in Northern India, saw ants larger than foxes. But to show how little attention such persons pay to the things themselves, and how completely their eyes are under the guidance of fancy, it may be stated as an undoubted fact, that one of these travellers mistakes a white bull for a black one; while another converts a number of asses into camels, which he describes as being laden with the household stuff of people escaping from a besieged town."—Pp. 52—55.

Nevertheless, Mr. St. John renders justice to these monuments, and, at the same time, vindicates his own impartiality, by expressing his conviction, that the sculptures are highly interesting monuments of antiquity, but that they incontestibly prove the low state of the arts in Egypt; and, with respect to the moral character of the people who could have been pleased with such indecent decorations, we can draw only the conclusion that they were a brutal herd of sensualists. And the notions which these decorations thus lead us to entertain, are justified in a most striking manner by an appeal to history. Herodotus, for example, informs us, that the dead bodies of women could not be consigned to the embalmers until they were attacked by corruption; and those who are acquainted with Livy, will not fail to remember the fearful picture of the enormities which the Egyptians covered with the mask of religion;

that author gives, in his description of the introduction of the mysterious worship of Isis into Italy. The barbarity of this people was not less than their licentiousness. Mr. St. John describes bas-reliefs on the Temple of Medinet Habou, showing that their barbarity far exceeded any cruelty that has ever been exercised by the most barbarous nations, and yet the Egyptians have been celebrated for their wisdom and civilization. And this barbarity was not only exercised in the early times of monarchy, but after writing had been invented; for he describes, that in the same picture, there is a secretary taking an account of the mangled members heaped up in the field of battle in bloody piles before the monarch. But their barbarity in mangling the bodies of their dead enemies, is trifling to the treatment they reserved for those who fell into their hands alive; he describes, that amongst the sculptures on the same temple, are three miserable wretches bound to the pole under the king's chariot; whilst, in other places, they are seen tortured by having their arms bent back over the shoulders so as to dislocate the joints; and others are seen stabbed to death, or having their throats cut before their idols. These views are certainly different from those generally entertained of the ancient Egyptians, but they are supported by monuments at present existing, and the relation of historians, whose credibility cannot be called into question.

The author now passes on to the description of the principal antiquities, and aims, as much as it is possible for him, at brevity; omitting to mention objects which have elsewhere occurred. The first thing he describes are the tombs of the kings. He set out with his party at an early hour, proceeding on asses across the plain towards the Lybian mountains, where several of the party were very much incommoded by the heat of the sun, which was, even then, very intense; especially when, having crossed the cultivated plain, they touched upon the desert, and entered the rocky defiles which lead to the Biban et Melook. We are unable to follow the author through the details into which he enters of the sights met with in his visits to several tombs. We cannot, however, pass over his sketch of the notions which the Egyptians had formed of a future state. He very properly draws his conclusions on this head, from the sculptures found on the walls of the tombs, as these are inconetestible proofs of their belief. In what they considered the happiness reserved for the good in the next world consisted, antiquity has not left us the means of discovering; but, whatever it may have been, the soul was not permitted to taste of it until it had undergone two examinations,—the one before mortal judges, and the second in the vestibule of the spiritual world, before Osiris-Separis, the supreme judge, and sovereign of the dead. They mingled the transmigration of the soul with these fables, and the different forms the Egyptians supposed it assumed, shows the grossness, adulatory, and injustice of their priests. They only considered the transmigration of the soul of man into that of the in-

ferior animals as a punishment; but, the rich and powerful might long divert this punishment, whilst the souls of the poor, in whose fate the priests were but little interested, after enjoying a short respite from the troubles of mortal existence, were again transformed into the bodies of bats and owls, and condemned, in these forms, to work their way to the mansions of the blessed, in the sun or the dog-star. The soul was considered to subsist in a separate state, emancipated from the degrading process of metempsychosis, as long as the body could be preserved from dissolution, and expensive drugs, perfumes, bandages, and sarcophagoi, by which the corpses of the higher classes were defended from the air, being entirely out of the reach of the poor, their bodies very soon returned to dust, and their souls consequently exposed to the penal migrations above described. The number of years the soul was condemned to pass in this state is entirely unknown, some thought it was excluded from final beatitude in the celestial mansions for the space of three thousand years, when undergoing a palingenesia or second birth, it ascended to the stellar spheres from which it originally came, whilst others imagined that the fixed period was about nine years, and others again, that it underwent, after the space of a thousand years, its palingenesia. Traces of the above doctrines are found in the sculptures on the walls of the tombs. Spirits are represented as coming up for judgment in the human shape, and, departing, transformed into birds or hogs; the latter being embarked in a small boat under the direction of Hanuman, the monkey-god, to be conveyed back to the scene of this world.

Mr. St. John, after describing the pictures and monuments of the tombs, concludes, that he has had utility in view, by dwelling so long on a class of objects which must necessarily rank in an inferior degree amongst the Egyptian monuments, since, in carefully investigating these remains of ancient civilization, we may possibly be able to arrive at the knowledge of circumstances capable of throwing a light on the early history of our race, and the moral and religious opinions by which their actions and happiness were influenced; it is only when such an end is aimed at, that such researches are of any real utility. We may even borrow some useful hints from savage nations of the present day, and although we may consider the ancient Egyptians as barbarians, coarse and lascivious in their manners, ignorant of political science, slavish, fanatical, and superstitious in the extreme, it is still possible for us to derive some advantage from the study of their architectural and plastic monuments. It is certain, however, that modern nations, were they inclined so to employ their wealth, are capable of effecting works infinitely superior, both in grandeur and vastness, to any thing ever accomplished by the Egyptians; our arts and mechanical contrivances being as much superior to theirs as London is to Thebes; but with us, wealth, in the hands of many, is employed in promoting the comforts and conveniences of private life,

or in public works of great and public utility. The most successful efforts of Egyptian civilization, are as a mole-hill to a mountain, when compared to our roads, bridges, moles, piers, breakwaters, and canals; our magazines, arsenals, and navies, all of which are necessary to the safety and well-being of a great empire. Even in architecture, the branch of art in which they most excelled, our ancestors, destitute of the means we now possess, greatly surpassed them; witness, for the truth of this assertion, the church of St. Peter's at Rome, St. Paul's in London, Westminster Abbey, and the many venerable piles which are still our pride, and which show what might be done with the resources we now possess.

The author next vitited the vocal statue of Memnon; but as this is a subject of the greatest importance, we cannot do better than give the author's own description of it.

"Memnon, son of Tithonus and Aurora, was a king of Ethiopia, who having, during the Trojan war, advanced at the head of an army through Egypt, and marched as far as Susa, Priam, his uncle, entreated his aid for Troy. The hero consented; and after the death of Hector was regarded as the champion of the Phrygian host, until he also fell beneath the spear of Achilles. The traditions are not agreed respecting the place of his burial. According to some he was interred on the banks of the Æsépes, a river of Mysia, which falls into the Propontis; others place his tomb in Cyprus; others in Syria; while a more poetical tradition relates that his mother, the Goddess of the Dawn, repairing herself, after his death, to the plains of Troy, bore away his beloved remains, and interred them at Susa, "the city of Lilies," where she caused a magnificent monument to be erected to his memory. Being of celestial birth, Jupiter, at the request of Aurora, consented to distinguish his funeral from that of other mortals. When the body had been deposited on the pile, and the fire kindled, there immediately issued from the flames a number of birds of prey, which, having flown thrice round the pyre, divided themselves into two bands, and engaged in so sanguinary a combat that above half their number remained dead upon the field. The survivors then departed; but every year, on the aniversary of the death of Memnon, repairing from Cyzicus to Ilion, they renewed their combat over the tomb. These birds, by the ancients called Menonides, were of a black colour, and, though by nature carnivorous, abstained from the taste of flesh. After his death Memnon was worshipped as a god. His statue at the foot of the Libyan mountains, on the plain of Thebes, was erected with its face towards the east, that it might be gilded by the earliest light of the dawn. When surrounded by darkness its notes appeared to be the melancholy expression of pain; but in the morning, when smitten by the first rays of the sun, it uttered a melodious, though plaintive sound, like the breaking of the string of a harp, indicating his sorrow at being deprived of his mother's presence by the approach of Apollo. The colossal statues of *Kaiumers* and his consort, situated among vast precipices on the road between *Bamiyan* and *Balkh*, have also their faces turned towards the east, so that when the sun rises they seem to smile, but look gloomy in the evening.

"The explanations hitherto given of this fable are forced and trifling.

And how shall we account for the fact, that the statue formerly, on the rising of the sun, emitted a vocal sound, but is now silent? Strabo states most distinctly that he heard it, but insinuates his suspicion that it was caused by the artifice of some of the bystanders. Learned and ingenious writers have laboured to establish a connection between light and sound, and to explain physically what the ancient pagans regarded, not as an effect resulting from any general law of nature, but as a miracle. To this philosophical solution there is a serious objection, that, although the statue stands where it always stood, and is still in the same condition as when visited by the Greek geographer, the rays of the sun smite upon it in vain. Whatever connection there may be between light and sound, Memnon is now mute. It would appear, therefore, that we must, after all, recur to the imposture of the priests, who delight in deception of all kinds, upon which, in fact, their empire over the multitude depended. A slight blow will sometimes elicit from large blocks of stone, a reverberation like that attributed to this statue. In crossing the court of the great temple of *Kalabashi* at night, my heel struck against the corner of one of the huge blocks that lie scattered about, and produced a sharp and startling note, not unlike what is caused by the breaking of a harp-string, though much louder. The accident immediately brought to mind the statue of Memnon; and I again repeatedly sought to produce the same effect, but without success, not being able to discover the part of the stone which it was necessary to strike. Had noon, instead of sunrise, been the moment selected for the accomplishment of the miracle, a circumstance that occurred at Déndera would have induced me to refer it to physical causes, and absolve the priests; for, about mid-day, while engaged in examining the sculpture on the southern extremity of the Temple of Venus, the sun at the time shining very brightly, I heard in the wall a loud sound, proceeding from east to west, resembling, I imagine, the music of the vocal statue, and undoubtedly the effect of heat."pp. 84—88.

Mr. St. John, having visited the principal remains of antiquity on the western bank of the Nile, which appears to have been the site of the original city, and to have contained the most ancient monuments, passed over to the eastern side, and commenced his observations with the temple of Luxor, part of whose vast ruins are filled up by the dwellings and cow-houses of the Arabs. In removing the obelisk, the French fitted up a small house at the southern extremity of this temple; which they have left for the use of travellers. In this house, Mr. St. John, with his companions, breakfasted; and had scarcely ended their meal, when a dancing girl made her appearance at the door, and demanded whether the party required her services. These women appear to be rather numerous at Luxor, and seem to have made some progress in refinement, for some of them spoke French. After describing the ruins of this temple, together with those of the temple of Déndera, and every thing worth mentioning in those parts, the author with his party proceeded down the Nile, to examine the ruins on the banks of that river, but our limits not allowing us to follow him through the whole of his delightful excursions, we must content ourselves with a sketch of his description of the crocodile mummy pits, in the

attempt to explore which, Mr. Legh, in 1812, lost two of his guides, and where the author himself was very near sharing the same fate.

In making inquiry for these pits, the inhabitants from Sheghalghil to Maabdé denied all knowledge of them, but their ignorance was feigned, as was afterwards proved; for upon the traveller and his companions assuring them that they did not want them to enter, but merely to show them the mouth of the cavern, several men consented to become their guides, though their wives thinking that they might be induced to hazard the descent by the offer of rewards, besought them not to go; but the men, who had no idea of going beyond their agreement, endeavoured to silence their fears; but the poor creatures not relying on their promises, still continued to follow us at a distance with their children in their arms. They were soon however left far behind, not being able to keep pace with the travellers, in climbing the rocks. After wandering about for many miles, the travellers at length found the mouth of the cavern. The entrance is a triangular hole, resembling a crocodile's head in shape, and about six or seven feet in length, and about four wide: the depth does not exceed fourteen or sixteen feet. The author being impatient to visit the interior, leapt down at once, he was followed by Suleiman and Monro, as likewise by one of the Arabs. The effluvia issuing from the interior exceeded all the disgusting smells the author had been ever exposed to. Their tapers being lighted, the party continued their way through a low narrow passage on the right, gradually lessening as they advanced, and at length terminating abruptly. They therefore found it necessary to retrace their steps. On coming back to the mouth, they discovered a very low, but much broader entrance than the former, through which they advanced, and after creeping along for ten or twelve yards, they found themselves in a spacious but not lofty chamber, with innumerable black stalactites depending from the roof. Close to a narrow and low passage they found a square hole, like a window, much too small to permit Monro to enter; but the author imagined that it might admit him, but he was mistaken: for after having thrust his legs in, he found that his body would not enter. They next tried the passage; but, after many turnings and windings, this terminated in a cleft of the rock, only sufficiently large to admit a serpent or a bat: they were therefore obliged to return again to the large chamber, where they continued their search for more than an hour without any success, and were ultimately obliged to return to the open air. They found the Arabs waiting at the mouth of the cave for their return, who refused to show them the nearest path to the place where the boats were moored. Following a small sheep-track, leading towards the edge of the cliffs, they at length found the boats, and discharging the guide, who was the only person who had descended with them into the cavern, and who had continued with them in their search for the boats, they proceeded down the

river, but in less than half an hour they saw two Arabs running along the shore, and shouting for them to stop. The boats were therefore ordered near the shore, and the two Arabs taken on board, who proved the proper guides to the crocodile mummy pits, but who were absent from Manfaloot when the travellers were there, but who having heard of their unsuccessful expedition, had followed them to offer their services. They professed to be perfectly acquainted with the place, and promised if they would remain until the next day, that they would conduct them where they should find the crocodile; the party therefore returned with these two men to Manfaloot. The next morning, the travellers, on descending to the spot where they had engaged the guides to attend them, found not only two, but thirteen: all of whom had been attracted by the hope of a present. An old man with a white beard, said he had known the pits from his youth, and that he would conduct them where they would find crocodile mummies of all sizes. They accepted his offer, and ordered him to proceed, which he did, conducting them to the cavern they had visited the day before. The old man, his son, and two Arabs led the way: Mr. St. John and his servant followed, and Monro brought up the rear with a guide who was to show the way back, if it was found impossible to proceed. Having reached the large chamber, where they had lost so much time on the preceding day, the old guide turned to the right, and crept forward through a small hole, the mouth of which was hid by the projection of a rock. After having encountered an immense deal of annoyance from bats, and from being penned up in so narrow and confined a dungeon, they at length came to a long and comparatively lofty cavern: this was the end of their wanderings; they had now arrived at the mysterious depository of the crocodiles. It was an irregular fissure, of about thirty feet long, and eight wide; the height varied in different places. The pendent stalactites were of a shining jet black, and when a candle was applied to them, they burnt and smoked like pitch: opposite the entrance which was near one end, lay a heap of palm leaves, mummy rags, and human bodies. Proceeding to the farther extremity, the author perceived a series of apparently small mummies, packed close together, and placed nearly vertically; supposing them to be little children, he inquired of the guides if such was the case, but was informed that these were the crocodiles, the upper part of which only was visible. Whilst they were selecting five or six from the mass, Sulieman, who had been silent for some time, said that he felt his head swimming, and was unable to see; on looking at him, his eyes were found closed, and his head had fallen on one side. Immediately rousing him from his stupor, the party retreated, which was effected very slowly, as the guides were now encumbered with three mummies.

The old guide and his companions having remained in the fresh air for a short time, descended again to bring some more crocodiles, and after some time returned with two, together with the mummy

of a red-haired girl about the age of ten or twelve. The Egyptians were accustomed to sacrifice red-haired persons to some of their deities, and perhaps these victims were considered as sacred after their immolation, and buried with their gods. The author was so disgusted with this mummy, that he refused to take it away; it was therefore left in the desert, to become a prey to the famished hyænas, if they would devour such an object. Although the Egyptians considered the crocodile as a divinity, they did not preserve his body with that care as they did their own; they neither enclosed it in a coffin or sarcophagus, but merely embalmed it, and enveloped it, like the human mummy, in linen bandages, sewn together with twine, and secured with broad tape. The entrails were separately embalmed, and strung together in small bundles, and placed in palm leaves beside the body.

Mr. St. John appears to have paid great attention to the condition of the inhabitants, which he found in as degraded a state as could be possibly imagined, as the following extract will show.

"572. This morning the condition of the peasantry appeared more debased and humiliating than usual; for the neighbouring hamlets had been visited by a recruiting party, who, having collected a number of men, were proceeding with them towards Mitraheni. Observing, however, that we were about to overtake them,—for our camels were fleet and powerful,—they hastily turned aside out of the path, and stood still at a considerable distance, until our party had passed. Some wretched Frank was, perhaps, at their head, who, not having lost all sense of shame, thus sought, by a precipitate retreat, to avoid the finger of scorn. The female relations of the conscripts, who had probably been forcibly compelled to return, we met upon the road;—a heart-stricken sorrowful group,—some absorbed in sullen grief, others weeping bitterly. Continuing our journey, we soon observed a complete shifting of the scene:—small parties of peasants, male and female, young and old, with laughing eyes and merry faces, proceeding towards a bazaar, or fair, held at a neighbouring village. Towards this point numerous pathways converged from distant parts of the plain, and, mounted on lofty camels, we could discover the various groups from afar, as they appeared and disappeared among the scattered date-groves. Several knots we overtook and passed. Some, like pedlars, were carrying their rural merchandise,—the produce of their fields and gardens,—to sell at the fair; others, from their being empty-handed, were evidently proceeding thither to buy; but all seemed equally lively, laughing, talking, and cracking their jokes, as if Egppt contained no Pasha. The men were invariably armed, some with muskets or spears, others with those long heavy sticks called *naboots*, without which no Arab peasant ever ventures abroad. I observed that the women always walked on foot, while the men, perhaps, were mounted on asses, and carried the children on their laps. Why the women do not ride is more than I can comprehend: it may be barbarism; it may be decency; as, without saddles or stirrups, it would be difficult for them to do so without exposing themselves. Even in Cairo, where the fair sex wear trousers, and are enveloped in ample drapery, the legs, by the awkward manner in which they sit their beasts, are frequently bared to the knee;

while the rude ass-driver, in lifting them up and down, and in preserving them, in slippery places, from falling, makes exceedingly free with the persons of women supposed to live retired in inviolable harems, and who, when abroad, affect scrupulously to conceal their faces.

"583. On arriving at the bazaar, held, like an English country fair, in a field on the outskirts of the village, we alighted under a palm tree; and, leaving our attendants to prepare breakfast, mingled among the crowd of Arabs assembled on the plain. The scene was highly characteristic. Rare and costly spices from the farthest East, which could scarcely be supposed ever to find their way into the hut of an Egyptian peasant, were spread upon the grass in the midst of ordinary Venetian beads, corn, peas, beans, cheese, and butter. Rows of market-women, some with bread, others with eggs or dried dates, sat on the ground, surrounded by horses, asses, and camels, which, with singular tact, passed to and fro beneath their heavy burdens without trampling even on the hem of their garments. Both men and women, however, exhibited that noisy brawling propensity which in all countries distinguishes the vulgar; the buyer and the seller, whatever might be the value of the article in question, seeming by the loudness of their voices, and the fierceness of their gesticulation, to be engaged in mortal conflict; but when the bargain was concluded, the vociferation likewise ceased, and the disputants chatted and laughed together with their usual good humour. In one part of the bazaar, where a sturdy fellah was engaged, perhaps in cheapening an ass, you might behold twenty individuals of both sexes, nowise interested in the transaction, encircling the chapmen, and entering with so much earnestness into their business, some siding with the buyer, others with the seller, that a stranger would certainly suppose that they were to receive a commission on the proceeds. To a painter in search of grotesque costumes, these motley groups would have afforded delectable materials; for the Neapolitan lazzarone are less whimsical in their habiliments than the Arabs. Turbans, white, black, red, or green; cream-coloured, brown, or striped white and green cloaks; blue shirts, tattered blankets, which disguised rather than covered the wearer, and rags of every colour in the rainbow, fluttering in the wind, met the eye on all sides. But the countenances of the fellahs exhibit little variety, excepting such as results from sex or age, or different stages of famine or disease. Hungry dogs, the universal scavengers of Egypt, prowled about the bazaar, ravenously snatching up whatever was thrown to them, and seeming quite prepared, if occasion were afforded, to rend and devour the donors."—pp. 277, 280.

In travelling towards Cairo, the author's attendant, who was a Caireen, was very near being robbed by two Bedouin pedestrians, armed with muskets and bayonets, who also appeared to be bound for Cairo. He had the custom of always loitering in the rear. When he came up to the two Bedouin travellers, they immediately inquired of him what he had in the saddle bags. "Nothing but papers," he replied. "Kafin!" they exclaimed, "it is false. Franks never travel without money. Descend, therefore, you dog, and open the bags, or we will shoot you and burn your father!" And there can be no doubt but what in a few minutes they would have made themselves masters of all the baggage, had not the party

at the moment, supposing him to be gossiping with the strangers, rode back to put an end to their conference. The Bedouins, on observing this, made their escape across the fields, towards an encampment to which they probably belonged. The terrified Arab then related what had taken place; and upon being asked why he had not shouted for help, as the party was within hearing, he replied that he was too much terrified.

The author remained some time time at Cairo, where he was occupied in examining the city and its environs. He thinks that of all the spectacles that a traveller can witness, there is none more deserving of notice than the departure of the pilgrim caravan, which annually traverse the Arabian wilderness to Mekka. It takes place in the spring; but on account of the decay of religious zeal in all parts of the Mahommedan world, the pomp and magnificence formerly displayed on these occasions is very much diminished. At the time he was here, the enemies of Mahommed Ali, who are more numerous than his friends amongst the Turkish part of the population, industriously propagated the report that a dangerous rebellion had broken out in the Delta, and the newly-conquered province of Syria; and by these and other means great political agitation and popular discontent were everywhere kept up. The Pasha's authority was daily set at nought. Robbers and murderers, imagining that the reign of law was annihilated, commenced openly to exercise their atrocities. Everything, in fine, appeared to indicate the approach of one of those periods of transition in which governments are overthrown, and society shaken to its foundation.

From Cairo, Mr. St. John proceeded to Alexandria, where he describes the principal objects worth seeing. He then makes a few observations on the general character of the Coptic inhabitants of Egypt, which are anything but flattering; but they are a disgusting people, and not worth further observation.

From the description Mr. St. John gives of the schools and colleges which Mahommed Ali has established, it is evident that this prince whishes to see Egypt a civilized country. They appear to be regulated with the greatest order. The school of medicine at Abou Zabel, is undoubtedly one of the most extraordinary of the Pasha's public establishments. It is not, as it has been asserted, situated in the desert, on the contrary, it is surrounded by vegetation; and in the month of March nothing can be more beautiful than the surrounding scenery. The hospital, to which there is a botanic garden attached, is a large quadrangular building, divided from the lodgings of the Europeans by a broad esplanade, planted with long avenues of mimosa, sycamore, and date trees. In the central of the botanic garden is a large square building containing a museum, dissecting rooms, a theatre for lectures, a laboratory, a dispensary, and dependencies, with store-rooms, kitchens, and baths, both in the European and Oriental style. One side of the hospital is converted into a spacious school-room, capable of containing two hun-

dred boys, the walls of which are adorned with designs illustrative of science, and the different phenomena of nature. The remainder is occupied by a lithographic printing-office, where, by the means of four presses, the young Arabs are constantly employed in printing Arabic translations of the best European works on medicine, with anatomical drawings. The number of students at present amounts to about two hundred, amongst whom are three eunuchs and four female slaves, who are educated for the interior service of the Pasha's harem. The hospital contains accommodation for six hundred patients. There is a veterinary hospital and school adjoining the school of medicine at Abou Zabel, under the direction of a Frenchman; one hundred and fifty pupils here receive instructions in the duties of their profession. The Pasha is particularly careful that each of his employers should have a certain number of youths from the college of Kasserlyne placed under them, to be instructed in their business. Mr. Wallace, the English engineer, is the only person who will not comply with the Pasha's wishes on this point. There are schools established both in the army and fleet, where the soldiers and sailors are taught reading, writing, and arithmetic.

The Pasha does not show that extraordinary prudence in his measures for regulating commerce and industry as he has with regard to education; as those which he adopts on this point are frequently destructive of his own designs. This can very easily be explained. Mohammed Ali is an uneducated man, a soldier of war, who, at the age of forty, could neither write or read; and those by whom he is surrounded are more ignorant than himself. These circumstances, if duly considered, will fully account for his errors in political economy and government; whilst his exertions to diffuse the seeds of civilization, awaken the energy of the Arabs to create a vast naval and military force, to emancipate himself and his country from the yoke of the Ottomans, cannot be otherwise regarded than as the manifestation of a great and original genius.

The Turks looked upon Mohammed Ali, before the recent Syrian war, with the greatest scorn and contumely, regarding him as a servile rustic, born slavishly to till the ground of his master; the following anecdote will be sufficient to illustrate this.

"An envoy from the Porte, on arriving at Alexandria some time before the war in Syria, was received with affability and distinction by the Pasha, who, in order to impress on his mind a high idea of the power and resources of Egypt, showed him his palace, forts, arsenal, and fleet. When he had beheld the whole, the envoy coldly observed,—"Your Highness, I see, is blessed with many excellent possessions: but *one thing* you want." "And what," demanded the Pasha, "is that one thing?" "*An army*: for what are Arabs? Look at our Turks; have you any soldiers like them?" "Your Excellency is entirely mistaken," replied Mohammed Ali, with earnestness: "my Arabs are excellent soldiers; and when the day arrives to put the matter to the test, *you shall see!*"—p. 482.

The author enters into a detailed history of the causes, progress, and termination of a war, which ended in a complete triumph of the Egyptian arms; and into a description of the character of the Egyptians themselves, and of the extraordinary man who led them on to break asunder the servile chains in which they had been so long fettered, and by whom their destiny is at present regulated; but we regret we cannot follow him through it, as we have already devoted to him as much space as our limits will allow. It is with a sense of regret that we are thus obliged to take leave of our author, as his style is most pleasing, and every page exhibits the author as a diligent and persevering observer, and, therefore, a highly useful traveller.

ART. II.—*Necessity of Popular Education, as a National Object, with Hints on the Treatment of Criminals; and Observations on Homicidal Insanity.* By James Simpson, Advocate. Edinburgh: Adam and Charles Black. London: Longman, Rees, Orme, 1834.

WE have read this book from the first to the last page, with increasing delight, and have felt that the task of reviewing, to do justice to a work of such extraordinary import and value, could only be difficult in relation to the choice of our extracts. Here, in truth, is a real *embarras de choix*; for wherever we turn, we find the same enlightened views, the same deep benevolence, the same power of illustration, the same weight of argument, brought to bear on a subject, the very name of which was beginning to suggest the ideas of vapidity and weariness which the mind associates with, an impracticable and interminable theme. All great generalities, affecting the moral improvement of man, however useful they may ultimately become, are liable to have their very utility disputed, so long as inpulses are given for their promotion, in a desultory and irregular manner, and without reference to any fixed or rational plan. This has been precisely the case with education. Its opponents have largely availed themselves of the non-existence of a practical basis whereon to erect the superstructure of popular education. "What," exclaim they, "shall we educate the people, communicate that knowledge for which we pay so dearly, imitate the insensate philanthropy of our ancestors, in founding schools and colleges for a purpose which can never be accomplished, and endeavour to break down those very distinctions which nature herself has established?" On this last head, indeed, their uneasiness may be easily tranquillized, for nature does quite enough for the purposes of distinction, by producing a constant and ample supply of mediocrities. "To educate the people," according to these reasoners, "is impossible; the nineteenth-twentieths of our species is doomed, from the indomitable force of circumstances, to perpetual

ignorance, grossness, and barbarism." They will scarcely condescend to imagine, that the Almighty can have endowed them with organs susceptible of culture, or minds capable of refinement. They are, and must ever continue to be, "The herd." "Where," say they, and with a certain air of triumph,—"Where is your plan? Can you win us over to your views, by the exposure in detail of any system which may be considered as possessing the slightest degree of practicability? Do not mock us with a delusion; do not amuse us with your day dreams; we consent, for a moment, to shut our eyes to the perniciousness of your misdirected philanthropy, to blind ourselves to all consequences; but show us a system of efficient, well-directed, and practicable details, before you disturb us with a cry for education, which we consider as only one more added to swell the howl of public discontent; one more expression of the restlessness of these our times." To these reasoners,—and their name is legion—many of whom entertain these sentiments, with sincerity and good faith. We say, read this book. We have read many books which beget feelings of elevation and pride for the dignity of man, which improve him morally and socially, but never any, no, not one, which lets in such a flood of hope for the future terrestrial improvement and happiness of the universal species. In the pages before us, the pious, sincere, and indefatigable workers of good will learn, and be convinced, that the noble principle of benevolence can never do more than partial good, and must often work much mischief, unless directed in full flow into the channel of popular education. But our very conscience condemns the prosecution of our own reflections on this admirable work, seeing that the space they occupy is a direct fraud upon its excellence, and that the reader must be infinitely more interested in its details, than in any thing which we can offer in commendation of them; we proceed, therefore, to our sketch.

In the opening pages, the author exposes, and bewails with Lord Brougham and Dr. Chalmers, the "horrible extent to which ignorance prevails;" traces the intimate connection as of cause and effect, between this ignorance, and the suffering, moral and physical, which is its inseparable attendant; and points out how little it is practically believed even by the educated classes themselves, that the relation is so close between ignorance and profligacy; and this, he adds, "is the only assignable reason for the amazing indifference, the incredulity, and even scorn, with which all plans, schemes, and projects for the enlightenment of the great body of the people are yet treated."

But it is not merely that the classes of society which live at their ease, are blind to the connection between vice and misery on the one hand, and ignorance and mental darkness on the other; the manual labour classes themselves, are equally blind to it: this is very ably shown in the sketch which the author gives of the physical, intellectual, and moral condition of the manual labourers. All the

pleasures which human beings may enjoy, depend upon the cultivation and improvement of the faculties with which the Creator has gifted them; cultivation of them is, therefore, the condition annexed to the gift. The Almighty has done his part, and when we leave our fellow-beings in ignorance, we disobey his ordinance, and degradation is the consequence and the penalty of our neglect.

But the crude notions prevailing on the nature of education, and its supposed inadequacy to rescue from the mine of misery nine-tenths of mankind, operates powerfully against the employment of the only remedy for so much suffering. Until these notions are corrected, and education itself better understood, the progress of social improvement will be slow indeed. Is education, as it is now conducted, of a kind to impart useful practical knowledge for resource in life—does it communicate to the pupil any light upon the important subject of his own nature and place in creation—on the condition of his physical welfare, and his intellectual and moral happiness—does it, above all, make an attempt to regulate his passions, and train and exercise his moral feelings, to prevent his prejudices, suspicions, envyings, self-conceit, vanity, impracticability, destructiveness, cruelty, and sensuality? Alas! No. It teaches him to read, write, and cypher, and leaves him to pick up all the rest as he may. It forms an instructive example of the sedative effects of established habits of thinking, that our ancestors and ourselves have so contentedly held *this* to be education, or the shadow of it, for any rank of society. If a national system of education is to stop at reading, writing, and cyphering, it would save much trouble, and often disappointment, not to attempt it at all. There is a species of twaddle afloat, which expresses itself after this fashion: "I am no friend to over-educating the working-classes —education is running greatly too fast—teach them to read and write; all beyond is above their condition, and only serves to make them discontented with it." Mr. Simpson does not understand education in this sense, and those who think so, err grievously. By education, properly so called, he aims at the regulation of the inferior feelings, at moral training and intellectual improvement. His views on the imperfection of education, even in the so called educated classes, will be gathered from his second chapter.

Mr. Simpson contracts the methods employed for the education of the inferior animals, and that of man; the trainers of horses and dogs proceed philosophically: they leave nothing to hazard, but study with the utmost care, the distinguishing qualities of the animals, and apply the best treatment to those qualities. But any kind of training is held good enough for the human animal, and moreover any kind of trainer, who professes to undertake the office. When the principles which ought to regulate education are understood, this grievous error will be corrected. It will then be known, and the knowledge acted upon, that *education is a process calculated to qualify man to think, feel and act in a manner*

most productive of happiness. It will be known that he has a certain constitution of body and mind, having certain definite relations to beings and things external to itself, and that in these relations are the conditions of his weal or woe. *Education will then be seen to have three essentials—first, by early exercise to improve the powers and faculties, bodily and mental;—secondly, to impart a knowledge of the nature and purposes of these powers and faculties;—and thirdly, to convey as extensive a knowledge as possible of the nature of external beings and things, and the relations of these to the human constitution.*

These relations, with their respective powers in the mind, are next enumerated; they differ essentially from the principles inculcated by metaphysicians hitherto, and the reader is allowed perfect liberty to reject any faculty which his own experience does not authorise him to recognise in the human mind. These faculties or powers are—1st, An appetite for food; 2ndly, An instinct of sex; 3rdly, An impulse to cherish his offspring; 4thly, A propensity of attachment to his fellow-men; 5thly, A propensity to contend and fight; 6thly, An instinct to destroy; 7thly, An impulse to conceal; 8thly, A desire to possess; 9thly, An impulse to construct. These nine propensities are essential to existence, even in the inferior animals. The author illustrates each of them; we select the last, as our space precludes more ample detail:—

"Independently of his reason, man has an impulse to construct, to change the forms and combinations of matter into instruments and accommodations. Franklin called him a 'tool-making animal.' The faculty is often possessed in uncommon power by creatures and other idiots, without an atom of intellect to guide it. Reason and imagination greatly aid the faculty in man, as is evident, when we compare the wigwam with the palace. Individuals differ greatly in this primitive power; some can make whatever they see, others cannot fold a letter neatly." These nine faculties he distinguishes as the Animal Propensities. There are three others which take rank above these; they are Self-Love, Desire of Estimation, and the Sentiment of Fear. The whole twelve make up and constitute the Scriptural entity of the "law in the members, warring against the law in the mind."

Next come the Moral Sentiments, which are Benevolence, Justice, Veneration, Hope, Firmness, Wonder, Imagination, The Ludicrous, Imitation; of these we select the author's illustration of Wonder:—

"Man loves the wonderful. That the sentiment of Wonder is innate, will scarcely be doubted by any one who observes its power as a motive, and the fortunes that are made by appeals to it. Well does the Charlatan know the effect produced by his cry of 'wonder!' It is evidently bestowed as a source of delight in contemplating the wonders of creation, and as an impulse to enquiry. With veneration and hope it constitutes the religious combination

of faculties; I mean what is called religious *feeling*, for conscience and reflection are the bases of religious *duty*. The joint operation in due proportion of the two sets of faculties, makes up the perfection, humanly speaking, of the religious character; while a separation of them is always more or less to be regretted. Take away, or impair reflection, and the remaining feelings will be apt to run into enthusiasm, and even fanaticism; take away, or diminish conscience, and we have the apparent anomaly of sanctity without honesty, of religious excitement with much unfairness, censoriousness, intolerance, and persecution. Wonder is met with in morbid activity; its madness sees visions, and dreams dreams; nay, attempts miracles; in combination with a high estimate of self, it constitutes the prophet of special revelation, and the angel of light admitted to the councils of heaven. Of this we have not to go far for examples; —the leaders and their followers are all over-excited *Wonderers*. Education is called upon to watch this faculty; it will show itself in a child, in a tendency to exaggerate and embellish, a marked delight to surprise and occasion wonder, with often an utter sacrifice of truth to attain that end."

Lastly—we have the Intellect given to regulate the whole, and divided into the Knowing Faculties, comprising the cognition of existences, of the events, the percipients of form, colour, sound, &c., and the Reflecting Faculties, comprising Comparison, Necessary Consequence, and to these is added Language.

All these faculties belong to every same individual of the human race; the want of any of them would be the imperfection of partial idiotcy. They are possessed in different degrees of endowment in many individuals. It is this difference which constitutes the endless varieties in the characters of men.

From these premises it will be quite obvious how inadequate our notions of education for the people are, when we would limit it to reading, writing, and cyphering; for these leave the inferior feelings untouched,—improve the moral sentiments in no respect,—and produce at most, but feeble and imperfect operations of the intellectual powers.

To see, therefore, how the education of the people is to be promoted on sound principles, we must proceed at once to the direct consideration of the subject, which naturally resolves itself into three distinct branches, namely, Physical, Moral, and Intellectual Education.

In the Chapter on Infant Education, the author proposes,

1st. That a watchful observance, and management of the temper, whose abuse is the impulse to violence and anger, should commence when the subject is yet in the cradle.

2nd. The child, so managed by his nurse, as to escape the first trials of temper, should be introduced as early as possible to his fellows of the same age; the best time, when he can just walk alone;

for it is in the society of his fellows, that the means of his moral training are to be found.

3rd. It is desirable, and even necessary, that his fellows shall be numerous; presenting a variety of dispositions, an actual world into which he is introduced, a world of infant business, and infant intercourse, a miniature, and it is so, of the adult world itself. The numbers should rather exceed fifty, than fall much short of it.

4th. But this intercourse must not be at random: each infant only bringing his stock of animalism to aggravate that of its playmates, and establish a savage community. It must be systematized and watched by well-instructed and habitually moral persons.

5th. The conductor's own relation to his infant charge, should be one of affection, cheerfulness, mirth, and that activity of temperament, which delights, and keeps alive the infant faculties.

6th. The infants should be permitted to play together, out of doors, in unrestrained freedom; a watchful eye being all the while kept upon the nature and manner of their intercourse.

7th. Unceasing encouragement should be given to the practice of generosity, gentleness, mercy, kindness, honesty, truth, and cleanliness in personal habits; and all occasions of quarrel or cruelty, or fraud, or falsehood, minutely and patiently examined into, and the moral balance, when overset, restored; while, on the other hand, all indelicacy, filthiness, greediness, covetousness, unfairness, dishonesty, violence, cruelty, insolence, vanity, cowardice, and obstinacy, should be repressed by all the moral policy of the community. No instance should be ever passed over.

8th. There ought to be much well-regulated muscular exercise in the play of infants, which should be as much as possible in the open air. Their school-hall should be large, and regularly ventilated, when they are out of it, and when they are in it, if the weather permits; and the importance of ventilation, air, exercise, and cleanliness, unceasingly illustrated, and impressed on them as a habit and as a duty.

9th. Every means of early implanting taste and refinement should be employed, for these are good pre-occupants of the soil, to the exclusion of the coarseness of vice. The play-ground should be neatly laid out, with borders for flowers, shrubs, and fruit-trees, tasteful ornaments erected, which the coarse-minded are so prone to destroy, and the infants habituated not only to respect, but to admire and delight in them; while the entire absence of guard or restraint will give them the feeling that they are confided in, and exercise yet higher feelings, than taste and refinement.

10th. The too prevalent cruelty of the young to animals, often from mere thoughtlessness, may be prevented by many lessons on the subject, and by the actual habit of kindness to pets, kept for the purpose, such as a dog, cat, rabbits, ducks, &c.; and by hearing all cruelty, even to reptiles, reprobated by their teacher, and all their companions.

11th. The practice of teasing idiots, or imbecile persons in the streets, ought to be held in due rebrobation as ungenerous, cruel, and cowardly. In the same way, other hurtful practices, even those which are the vices of more advanced years, may be prevented by anticipation. For example, ardent spirit-drinking may, for the three or four years of the infant training, be so constantly reprobated in the precepts, lessons, and illustrative stories of the conductor, and the ready acquiescence of the whole establishment, as to be early and indissolubly associated with poison and with crime; instead of being, as is now too much the case, held up to the young, as the joy and privilege of manhood.

12th. Many prejudices, fears, and superstitions, which render the great mass of the people intractable, may be prevented from taking root, by three or four years of contrary impressions; superstitious terrors, the supernatural agencies, and apparition of witches and ghosts, distrust of the benevolent advances of the richer classes, suspicions, envyings, absurd self-sufficiencies and vanities, and many other hurtful and anti-social habits of feeling may be absolutely excluded, and a capacity of much higher moral principle established in their stead.

13th. Besides the moral habitudes, which have been exemplified, rather than fully enumerated, habitudes gained by four years' *practice*, for at least six hours every day—the intellectual faculties must not be neglected in infant training. Those which begin early to act, must be the better for early judicious direction and exercise. At six months old, infants are commencing the use of the faculty of *observing* external objects, and are seeing, hearing, and touching with marked acuteness and activity. A judicious nurse instructed in the infant faculties, and their relative objects, might direct and exercise all these powers to their great improvement, so as to render them better instruments for the infant's use, when at two years old, he joins a number of his cotemporaries. The stimulus of numbers will work on the child, and bring out his observing and remembering intellect, in a manner that will surprise his family at home. The first objects of his attentive observation, will be his numerous little friends; then all the varied objects of that new world, the infant seminary; its pictures, numerous and highly-coloured beyond his dreams; the curiosities of the little museum; the flowers, the fruit-trees, the dressed border of the play-ground, the swing for exercise, the wooden bricks for building, the astonishing movements, and feats, and learning, and cleverness of the trained pupils, will all fill the youngest new-comer with wonder, delight, and ardour, and heartily engage him in the business of the place in a day or two. A skilful teacher will keep up the activity of the faculty of *wonder* thus excited, as long as he can, without the risk of exhausting it. Every object presented, is now a wonder, to be eagerly gazed at, and curiously handled; and here will commence with zeal on the infant learner's side, that grand but recent improvement in education: *real*, as

distinguished from merely *verbal*, intellectual training; but yet real, including verbal as an accessory, instead of verbal excluding real. The discovery, for it is so, that it is better at once to introduce the pupil to the real tangible visible world, than to do no more than talk to him about it in its absence, is of immense value, and of admirable application to infant intellectual training. The child of two years is acutely appetized for *things*, but yet very feebly for *words;* when, by a grand error, words are forced upon him, things will infallibly take off his attention, and often has he been punished for evincing a law of his nature, inattention to his book. If the instructor understands, and obeys nature, he will readily, and judiciously, supply things or objects to those faculties in his pupil, which were created to be intensely gratified with the cognizance of them. We mean by a judicious supply of objects: a scientific combination of the pupil's delight, with his improvement. The objects should be arranged in lessons, and successively presented to the pupil's senses and faculty for observing existences. The simple and obvious qualities of any object, are inseparable from it, and should be carefully pointed out to him: while, by a succession of objects, he will learn a variety of qualities, till he has mastered all the qualities of external objects, cognizable without chemical analysis. For example, present to a class of pupils, a piece of GLASS. Let them each, and all see it, handle it, weigh it, look through it, break it, cut with it, &c. They have thus got its colour, smoothness, hardness, weight, transparency, brittleness, sharpness. Let them, at the same time, be familiarized with the *words* that express glass, and all these its qualities, and let them see each word printed, and written, and spelled, by which means their reading is incidentally begun. Ask them if they can name something else that is transparent? They will probably answer, water. Something else which cuts?—a knife. If the piece of sponge tied to their slate is smooth? No: it is rough. Tell them the use of glass.

In this manner, they are led through a series of lessons, by which they are made familiar with the names, qualities, uses and abstract ideas belonging to objects. The operations of the *five senses* are explained, while the knowledge thus acquired, is classified, according as it has come through the channel of each sense, or through that of more than one sense at a time. These lessons proceed, and the pupils acquire the notions of the natural and artificial, such as wool, and woollen cloth, animal, vegetable, animate, and inanimate, illustrated by a quill, a flower, an insect. In another series, objects are classified according to their resemblances, and differences, which is plainly an advance upon the preceding lessons, as it calls into activity the reflecting faculty of comparison. The ideas imparted in these lessons are sufficient for infants from two years of age to six, the infant school period. Dr. Mayo begins these lessons at a much later period, but the experience of the model infant school in Edinburgh, has shown that this is an

uncalled for loss of time; as the very simple, though useful, knowledge imparted in those lessons, which is in requisition every moment of our lives, is found to be beneficially mastered by infants, and impressed on their tender minds so strongly, as it is trusted, never to be obliterated.

The reader, it is presumed, is now prepared to estimate the value of educating man according to his faculties. The lessons are never continued too long, seldom beyond half an hour; while the intervals are filled up with short portions of exercise in the playground, in which the teacher often joins, keeping up spirit, and active movement, while he is narrowly watching moral conduct and social intercourse.

Careful provision is made in the infant system, to give early religious *impressions* in a manner which shall connect religious ideas with every thing in life, and render them a means of happiness, and not, as is too much done, a source of tasks and punishments for the present, and terror for the future.

The Edinburgh Model School has now been at work for three years, and a Report has been published by the Directors of the Society, which, after detailing the progress of the children *intellectually*, which was witnessed on several occasions by the public, adds, in an Appendix, a series of incidents, the results of the moral influence of the place, classed according as they manifested —kindness, brotherly love, gentleness and mercy,—truth, honesty and honour,—attachment, refinement, &c.; and the picture, considering the class of life, is most satisfactory. By the extracts from this Report, which are given in an Appendix, and which will well reward the labour of perusal, the reader will find, quarrelling rarely occurring, fighting unknown, insolence and selfishness restrained, found money faithfully restored, provisions, however exposed, untouched, kindness, even generosity manifested, mercy to animals, cleanly habits, refinement, and ornament respected, and horror of ardent spirits inculcated and expressed. A few specimens, out of many letters received from parents, are added, which show the improvement effected on the conduct and demeanour of children at home; namely, a change from filth, laziness, obstinacy, waywardness, and selfishness,—to cleanliness, activity, docility, respect, and kindness.

While all appliances, direct and indirect are resorted to, for the purpose of regulating the inferior, and cultivating the superior feelings, that grand solecism of ordinary seminaries of education, an appeal to pride, vanity, and love of gain, three grand enemies of human weal, is avoided within the walls of an infant school. There are no prizes, medals, or places of distinction among infants. These are banished, or rather unheard of, as incompatible with the essence of the system; its chief object being to moderate selfishness, they would be as self-defeating, as oil applied to extinguish fire. They are, moreover, quite superfluous, under a system

of training, which gives delight by exercising so many of the faculties, and succeeds in keeping up for years, a degree of animation, attention, and zeal, which the selfish impulse of places and prizes never yet attained, in the dull routines which require these artificial stimulants. Mr. Wilderspin (who is the great originator of this admirable improvement of infant education,) was once asked by the author, if he had ever tried place-taking? He answered, "*my* infants would scorn the *baby* practice; it would lower the character of the whole school, and defeat my best endeavours for their moral improvement." Rewards as stimulating selfishness, and punishments as grounded on base fear, and exciting malignant feelings of revenge, are wholly proscribed, as not only hurtful, but unnecessary, in a well-conducted infant school.

Mr. Simpson has shown great anxiety to meet the objections which may be made to this altered, we should say, improved system of education. He does not conceal from himself, that a system so much at variance with that which now sways our schools, and with all the notions hitherto entertained of infant capabilities, must excite against it very strong prejudices. The idea, says he, is ridiculed of teaching children from two to four years of age any thing. It is called education run mad—a hot-bed of precocity—parrot-training—confinement and tasks when children should run wild—realising the adage, "soon ripe, soon rotten," and so forth. It is impossible to present a more instructive example of that ignorance of the human faculties which is yet nearly universal in society, than these objections, which, it must have been observed, are promptly and unreflectingly stated, and with considerable dogmatism, in every company where infant schools are mentioned. It is utterly unsuspected by the objectors, that man is a moral as well as an intellectual being; that he has *feelings* which require education, and that on the right training of these, depend the happiness of the individual and welfare of society, infinitely more, than on the highest attainments merely intellectual. Now, the education of the feelings, has already been shown to be the primary and paramount object of the infant school system: it has moreover been distinctly laid down, that these feelings are incomparably more easily bent, and moulded to good in infancy, than in after years; that, after six years of age, their effectual culture is, in many cases, nearly hopeless; hence, to delay it, till this age, would be to leave it out of education altogether; and this, to the heavy cost of society, has been hitherto, the ignorantly adopted alternative. No intelligent or candid person can read Mr. Wilderspin's work on the system; but, above all, *see* the inspiring spectacle of a well-conducted infant school, and persist in maintaining, that the intellectual culture is injudicious, premature, annoying to children, and useless: the intellectual faculties, and *all* these faculties, not one or two of them, as in ordinary schools, are moderately exercised, so as to combine amusement with instruction; and as they are presented

with their appropriate objects, they cognize, and enjoy complete comprehension of every object presented. Their studies are varied with healthful exercise and constant amusement, story, song, and fun; nothing like a task annoys them, and they obtain, without an exertion, much fundamental knowledge to serve them for life.

Those who are not so decided on the objection of premature education, are yet extremely peremptory on the point of committing the early years of infants to any other hand than the mother's. It is to break, they say, the hallowed bond which unites the parent and the child, to alienate the heart of the infant from his proper guardian, and take away from the latter all motive of parental solicitude. In answer to this, reference is triumphantly made to the letters from the parents of children at Edinburgh Model Infant School, as the best possible evidence of the working of the system in this important particular.

We wish these letters to speak for themselves. They are answers to a circular note, addressed by the secretary of the Edinburgh Infant Model School, to a large proportion of the parents, requesting their opinion, in writing, of the improvement of their children attending the school, in learning, manners, affection, obedience, health, and happiness.

"1. DEAR SIR,—I can scarcely express to you how much my children have been benefited by your more than excellent mode of tuition. Whether the many improvements so perceptible in them proceeds from your own qualifications, or from the general system, I know not; but this I know, that before my children attended the Infant School, they were slow, dull, and unmanageable; they are now active, lively, and obedient. I am, &c. (Signed) "JAS. FORBES."

"2. SIR,—I received your letter regarding the opinion I had formed of my son's improvement at the Infant School. I beg leave to state, that it has exceeded my utmost expectation; and in answer to your questions, the Infant School System, so far from alienating the affections of children to their parents, it increases them to a high degree, and makes them more obedient, and promotes greatly their health and happiness, and they are greatly benefited by the instructions they receive. I have also to return my sincere thanks for your kindness and indulgence to them. I am, &c.
(Signed) "E. GRAHAM."

"3. SIR,—I have the pleasure to inform you, that my child has improved in every respect. The affection of the child is not alienated from its parents: it is more affectionate and obedient. The health and happiness of the child is greatly improved and much benefited by the instructions received at the School. I am, &c.
(Signed) "JAS. FOGO."

"4. DEAR SIR,—It gives me great satisfaction to inform you, of the rapid progress the child is making under your care; indeed, it is wonderful, for so short a time. Owing to your excellent method, she has acquired a taste for learning she never could get at home. She has forgot her playthings, and if the day is so bad that she cannot go to school, she either sings us a song, tells a story, or goes through part of her school exercises

the best way she can by herself. She often mentions some part of Scripture, although she is only five years old. I assure you, Sir, her love and respect for her master is great. I think, Sir, all this will give you pleasure to hear, and with good wishes for the improvement of the children, and thanks for what has already been done. I am, &c.

(Signed) "CATH. ROBERTSON."

"5. SIR,—I am really delighted with my son for his intelligence since he went under your tutorage; and I altogether approve of Mr. Wilderspin's System of treating children, and, in my opinion, it is not only now, but in future years, it will be instilled in his memory. And you, Sir, I am convinced, have done your duty from the affection that he has towards you, for he is always speaking about Mr. Wright, or giving us a recital of the useful information you give him: and so much I approve of the system, that I am going to send another boy of mine as soon as the days get a little longer; and please accept of our best thanks for your attention to our son. I am, &c. (Signed) "THOS. WATSON."

"6. SIR,—With regard to our son's morals, we think them very much improved, for he has a true sense between right and wrong, and the greatness and goodness of God. His intellectual parts are as far advanced as we could expect in the time he has been at school, and we by no means think his affections alienated from us. As far as our judgment can direct us, we think it must be a great benefit to society. I am, &c.

(Signed) "JAS. THOMSON."

These letters, it is stated, were selected at random, from about thirty others. Many of the parents, who could not write, came personally to offer similar testimony in favour of the system. To these we add some proofs of the success of the system in its fundamental principle of governing by love, and not by fear, and that consistently with the most perfect order and discipline.

"1. The master one day intimated that he wanted a number of articles, of a kind which he enumerated, to illustrate the lessons. He was next day inundated with all sorts of odds and ends, every child bringing with him something,—leather, feathers, cloths, silk, stones, wood, glass, &c. &c.

"2. Accidentally saying that he would come and visit his pupils at their own homes, and if he did, how would they entertain him? the question was answered, by a burst of hospitality, and the number and variety of the articles of cheer enumerated were too much for his gravity. He observed, however, that *whisky* was *not* among the temptations offered him, in the competition for the preference of his company.

"3. A parent came one day to the school, expressly to be satisfied on the puzzle, as he said, it was to him, how a *schoolmaster* could render himself the object of love! His own was always the object of terror; and, instead of running to him when he appeared, he and his schoolmates went off in the opposite direction, with the greatest alertness. His boy, he said, runs *to* the master whenever he sees him, and is proud to come home and tell that he has shaken hands with Mr. Wright, of whom, as well as of Mrs. Wright and Maggy (the latter a worthy of three years old, the master's child, who sets an example to the whole school) he never ceases to speak.

"Mr. Wright requested the inquirer to remain, and see how he treated his scholars. He did so, and witnessed the kindness, the cheerfulness, and the fun which never flags, while he saw discipline and obedience at the same time. The children went to the play-ground, and, to the amazement of the visitor, the teacher ran out, crying, "Hare and hounds! hare and hounds!" taking the first character on himself, he was instantly pursued full cry by the whole pack, round and round the play-ground: at last he was taken, and worried by an immense act of co-operation. In his extremity, he rang his hand-bell for school; instantly the hounds quitted their prey, rushed into school, the door being scarcely wide enough for them, and were within a minute as still as a rank of soldiers, seated in their gallery, and busy with the multiplication table. The visitor went away, with a shrug, muttering, 'Na, the like o' that I ne'er saw!'

"Many pages might be filled with anecdotes illustrative of the beneficial effects of the system in preventing the numerous fears, follies, envyings, discontents, and prejudices, which render the lower classes so intractable. The superstitious fear of ghosts, witches, &c. is practically removed. A person informed Mr. Wright, that as he was crossing a church-yard, not without the habitual dread which from his youth he could not separate from the place, he met a little girl of five years old marching through all alone. 'Was she not afraid?' 'Not a bit: we learn at the Infant School that ghosts and all that is nonsense.' All dirty, gross, destructive, selfish, and insolent habits are proscribed, and carefully prevented; and, above all, *whisky* is held up as the greatest of curses to society, and many a lesson is taught of its effects on both mind and body. The children heard, with much indignation, of a crowd in the street, insulting a poor Turk,—of some boys who teased an idiot—of the mob breaking windows on occasion of the illumination—and of the people maltreating the Doctors for their kindness in trying to cure the cholera."—pp.375—377.

Pursuing his reflections on these facts, Mr. Simpson remarks, "that, independent of such evidence, a slight reflection would serve to convince any person of sense, that separation of the child from the parents for six hours in the day, is no greater separation, than actually takes place in every rank of life. Will any one pretend, says he, that parents in the lower classes, are fitted to exercise their children in moral, religious, cleanly and wholesome habits! Nay more, are there many parents in the middle and higher classes, who committing their children as they do, to the exclusive society of nursery maids for more than six hours a day, can say that they have time, and method and means for communicating moral improvement to their children, superior to what is done according to a system founded on the most philosophical principles, and the most enlightened views of human nature, the infant school system of Mr. Wilderspin! I have heard mothers of intelligence, accomplishment and experience, admit and regret that the principles of early moral education *cannot* be regularly, systematically, and efficiently be applied at home. The important, nay, indispensable element of *numbers*, to exercise practically the social virtues, is

wanting, and is not supplied by a few children of different ages in the same nursery; in *no* nursery is it possible to prevent selfishness, contention, and even fighting. Moreover, in the best conducted family, the children are left with servants for a longer period than the hours of an infant school; that *well regulated systematic nursery*, as it has been happily called by the Lord Advocate Jeffrey, where the children of all classes will be greatly benefited, by spending several of their earliest years."

But the system here so elaborately, we might add, beautifully laid down, is not abruptly abandoned; Mr. Simpson pursues it beyond the period of infant training. The soil so admirably prepared, so carefully kept free from weeds, must now receive the seed destined to ripen and flourish in the years of manhood.

"It is not advisable," says he, "that the pupil should remain in the infant school beyond the period of six years of age, as it has been found that the mixture of the older children operates upon the younger, too much in the way of influence, to the effect of diminishing an original working of the faculties. He must now be introduced to the school in which he is to find occupation till he arrives at fourteen, the age of puberty, at which, it is admitted to be practicable, that he shall have attained, besides moral habits, a sum of general, elementary knowledge, sufficient as a basis, if his destination be manual labour, for farther voluntary progress as the employment of his leisure time, as a resource in any situation in which he may find himself, and as the means of applying the faculties, in which he is strongest, to his own advancement in the world; while the just notions of social life, which he has attained, will regulate his future views, and at once deliver him from the various impostors, that now mislead him, and render him the enlightened and willing co-operator, with yet higher intellects, in plans for the general welfare. If the pupil's destination be a pursuit above manual labour, his acquirements at fourteen will form a basis, on which to push yet farther the pursuits of science, and apply these to exalt the character and usefulness of his future professional line of employment."

Our extracts are already copious, and yet our task is but very imperfectly achieved. To execute it to our own satisfaction, we should follow out the system as it applies to the more advanced pupils; but our space precludes this. It is a counterpart for excellence, with the portion of the system, which has already been so much dwelt upon, and leads on in the same lucid manner to what he calls "ulterior education;" that is for those who have leisure and means beyond those possessed by the manual labour classes. We shall, however, make room for one extract:—

"Many," says Mr. Simpson, "may be inclined on reflection, and the conviction of demonstration, to surrender their ancient association of natural knowledge with manhood, who yet may be positively impracticable upon the wild theory of teaching all that

has been proposed to *all ranks* of the people. This is really too much they say; what occasion can a man, who has to work at a handicraft trade, have for a course of chemistry, mechanical philosophy, or natural history? Will it make him a better tailor, carpenter, or blacksmith? Will it not, on the contrary, tend to raise his ideas of life, and tempt him to despise labour, and be discontented with his condition? The answer to all this, humbly offered, is that it will materially improve and facilitate his trade; but it will do much more—it will elevate his character, improve his social condition, and render him both a better and a happier man. A scientific knowledge of nature, will suggest to the manual labourer, improved and abridged modes of working, counteraction of the unwholesomeness of certain trades, in materials, posture, atmosphere, &c.; and it will show him the value of cleanly habits, fresh air, and muscular exercise, and the physical suffering resulting from excess, vice, and especially the abuse of ardent spirits. It will elevate the character of the labourer, for it will humanize him, improve the faculties of his mind, by substituting truth, and interesting subjects of thought, for superstitious prejudices, and all sorts of impracticabilities; deliver him out of the hands of impostors, political, fanatical, medical, and literary; qualify him for a wise use of the elective franchise, if he shall rise to be a householder; afford him delightful employment for his leisure from toil; exalt his impressions of his God, and render his religion sincere and practical."

"The objection that his mind will be too refined for his pursuits, and that he will be discontented, is not less unreflecting. It is the ignorant who are discontented, who have false views of their condition, who are unable to reject the representations of the designing, that have an interest in creating discontent and moving violence."

The further development of Mr. Simpson's plan, the expense of its organization, together with the encouragements and obstacles to its success, we cannot at present enter upon. But, no doubt, from the auspicious state of the public mind at this moment, we shall have ample opportunities of reverting to this most interesting subject of consideration. In the same, we must dismiss the valuable chapters on Homicidal Insanity, and precisely, for the same reasons, and with the very same hopes. From the ability displayed by the author of this book, it is evident that he is a practised and accomplished writer. This is not a treatise to be taken up, and disposed of in one reading; and though we take leave of Mr. Simpson as reviewers, we shall often take up his volume, which must become the text book of all enlightened educationists. As we said before, we have read this book with delight, and now close its interesting pages, hoping higher and better things for our own species.

ART. III.—*An Account of the Transactions of His Majesty's Mission to the Court of Persia, in the Years* 1807—11. By Sir Harford Jones Brydges, Bart. K.C., L,L.D., late Envoy Extraordinary, and Minister Plenipotentiary to the Court of Tæheran. To which is appended, a brief History of the Wahauby. Vol. II. 8vo. London: James Bohn, King William Street, West Strand. 1834.

OUR readers are fully prepared for this production of the worthy baronet, whose name is attached to its title above. We promised the public that we should afford them an opportunity of enjoying the interest of the present narrative, which, as will be seen, is highly calculated to fix their curiosity.

The scene of this story is assigned to a period about a century ago, and at that particular era it appears, that an Arab of the name of Abdul Wahaub, of the tribe of Tomym, left the Nejd to pursue the study of Theology and Divinity in the various schools and colleges of the East; and at length retired from Damascus, where he had pursued his studies, to Dereyah, a town situated in that part of Arabia called Nejd; in lat. 24. and long. 45. It is probable that the retreat of Abdul Wahaub to Dereyah, was not influenced by the most prudent motive, as the doctrines he had broached at Damascus and the other places where he had resided, had drawn upon him the censure rather than the respect of the divines of those places. He did not, however, reside long at Dereyah, when he converted Mahommed Ibn Saoud, the principal person of the town, to his way of thinking, and, moreover, became his son-in-law: the tribe to which Abdul Wahaub's father-in-law belonged, was that of Anissa, which, at that time, was one of the most powerful of the tribes inhabiting the desert. The great body of this noble tribe were generally stationed in a tract of land extending from the banks of the Euphrates at Hillah, to the confines of Aleppo, and from the Grain, at the head of the Persian Gulf, to the confines of Arabia Felix, and which is known at Bagdad and Bassora by the appellation of the Great Desert. Not long after, Mahommed Ibn Saoud had adopted the doctrines of Abdul Wahauby, he began to propagate the tenets of his teacher amongst his neighbours, and at this time his force was so trifling, that he, in his first skirmish with his opponents, he could only muster seven camel-riders in his company; but, it will be soon perceived, that the tenets professed by Saoud, contained much that was capable of captivating the minds of those who panted for civil and religious freedom. There was no point of the Wahauby faith more odious to the Ottoman government than that which divested the grand signor of his sacred character of visible Imaum, or spiritual head of the followers of Islam. Saoud was not long in assuming the character of temporal and spiritual leader, and found no difficulty in being acknowledged so

by those Arabs who had voluntarily embraced his doctrines, or who had been converted by force.

Saoud does not appear to have been long in drawing on him the notice of the Court of Constantinople, for when the author arrived at Bassora, in the year 1784, his proceeding caused great deal of anxiety and alarm to the Pacha of Bagdad, and to his governor at Bassora, as well as to the best informed Turks, who were perfectly aware that his doctrines were in perfect accordance with the Koran.

The government of Bagdad appear to have committed a great error in allowing Saoud, in the commencement of his career, to subjugate and incorporate with his proselytes, the tribe of Benicaled, an ancient and powerful class dwelling on the north-western shores of the Persian Gulph.

On account of the ill behaviour of the Pacha to the British factory then at Bassora, the establishment was, early in the year 1792, removed from that city to the town of Grain, in hopes that the effects produced by this measure on the trade of that city might bring the Pacha to an eligible arrangement of a tedious dispute, which the intrigue of the Jews on one side, and the bad faith of the Turks on the other, appear to have carried far beyond its real consequence. The author, as being a member of that factory, of course was obliged to proceed also to that town, which was in constant alarm concerning the form, the appearance, or reported appearance, of detachments of Saoud's troops. Whilst here the members of the embassy experienced great inconveniences from intense heat and the badness of the water. It is true, they were in a manner compensated for these evils by the strange and comical scenes which took place, when it was imagined that a Wahauby detachment approached the town.

Grain was nearly the only port on the western side of the Gulph of Persia, which at that time had not submitted to the victorious arms of Saoud, who appeared very desirous of conquering this mighty town, but its walls, which were only of mud, and which frequently crumbled down into large breaches during the rainy season, appeared to him as impregnable ramparts; and his only hope of success was cutting off the supply of water. As the season was very dry, there was no well within the city, which at that time afforded water, the inhabitants were therefore obliged to fetch it from some wells which lay about a mile from Grain. The most common periods of alarm were either about day-break, or at sunset, when those who were placed in advance near the wells, would fall back, and come running into the town with the doleful account of the appearance of the enemy: the women might be immediately seen in their veils on the tops of the houses, sending forth the well-known eastern cry of "Leily—Leily!" a term used both on occasions of rejoicing and alarm; the whole town would instantly assemble together, and with their venerable shaik at their head,

prepare to meet their dreaded foes. The alarms were generally false, no foe appearing, or sometimes the baronet with his companions of the embassy, could, with their glasses, see from ten to twenty persons about the wells. When this was the case, each party advanced within a certain distance of each other, a few of the most valiant men on each side sat down at a very far distance from each other, and exchanged shots with their long matchlocks; and when they had amused themselves for some time, either the morning broke, or the evening closed, and the sport ceased. Things had gone on in this way for some time, when at length one glorious day placed things in a very different light.

Early in the morning, about five hundred of the enemy appeared on the horizon of the desert, and bearing down towards the town. The shaik and the inhabitants were soon at their post, and what was very much in their favour, bore with them a piece of ordinance from one of the shaik's vessels: every one placed great confidence in this formidable machine. The courage of many was put to the test by the war-like appearance of the foe, armed with long spears, and mounted on spirited horses; for if the gun failed in the first trial to do its duty, the Grainers might be charged and cut to pieces before they could again bring it to act. The excellent shaik, like a skilful general, made use of his ally as soon as it was possible for him, so that when the combatants approached within about half a mile from each other, off went the cannon, and away went the shot, ploughing up the earth to within a few yards of the foe; who, instead of charging, remained a few minutes either in astonishment or in council, and then, as was best for them, quietly moved off.

All this time the members of the factory at Grain, had kept on good terms with Saoud by presents, as they found this necessary in order to preserve their own safety, and that of the public despatches, which were then transmitted across the desert, to or from Aleppo.

When in 1798, the author arrived at Bagdad, he found that Suleiman Pacha, had received pressing orders to adopt the most efficient means to put down the power of the Wahauby faction, which was vastly increasing in strength. Suleiman had therefore collected a large force, and had placed it under the command of his Kiah, Ally Pacha, who was then encamped without the walls of the city, and destined to proceed against the Wahauby. A few days before Ally Pacha marched for Dereyah, the chief city in the power of the Wahaubys, our author paid him a visit in his camp, which he says, made a most gallant show. But notwithstanding this, the expedition failed, and terminated in a truce being entered into between the Wahaubys and the Kiah, and an audience of an envoy sent from the former with Ally Pacha, which had the effect of teaching them to despise the Ottoman power; but we shall give the author's own words, for a description of both:—

"The army consisted of 4,000 or 5,000 Turkish troops, and twice

that number of allied Arabs of the tribes of Thofyr, Beni, Shummere, and Montefeek. Their march (after reaching the neighbourhood of Bassora) lay parallel with the Persian Gulf, through a desert country where wells were found at every station. It was directed, in the first instance, towards El Hassa or Lassa, the richest and most productive part of the Wahauby dominions.

" Instead of advancing from that place at once towards Dereyah, (only five or six days' journey distant) they laid siege to the fortified citadel of El Hassa, which they expected to take without difficulty. The resistance was prolonged above a month; and the arrival of a considerable Wahauby force, under Saoud, the son of Abdil Aziz, (who remained at Dereyah) excited strong doubts of the Kiah's success; so strong indeed as to induce the Turks to retreat. Saoud had anticipated this measure, and starting before them, encamped with his troops at one of the wells called Thadj, at the distance of three days from El Hassa. The other well of that watering place, about two miles further off, he rendered useless, by throwing into it several camel loads of salt, which he had brought with him for that purpose. The Bagdad troops halted at the last of these wells, and it may be conceived how much the men and horses suffered from the adulterated quality of the water. Here the Ottomans did not judge it prudent to continue their march, lest Saoud might fall upon them by surprise. On the other side, the Wahauby chief ventured not to attack the Turks, for their artillery was very formidable to him and his Arabs. Thus the two armies continued three days within sight of each other, in opposite ranks, only a single horseman skirmishing occasionally in the plains from each party. A parley was then established, a truce was concluded for six years, between Saoud the Wahauby, and the Paçhalik of Bagdad, and both armies returned quietly to their respective homes.

" With the Kiah, on his return to Bagdad, a Wahauby officer arrived to receive the ratification from the paça of the truce entered into by the Kiah, and I was invited by the paça, I know not for what reason, to be present at this person's first audience. The palace at Bagdad is situated on the Tigris; and consists of three large square courts, besides the private or women's apartments of the paça and the Kiah. The side of both these courts next the river is taken up with the public dewans, or halls of audience of the paça and his minister: and as both of these personages had been for some time prisoners at Schyras, during the reign of Kerim Khan, these rooms were splendidly fitted up, after the Persian manner, with pillars covered with small pieces of looking-glass, handsome coloured awnings, to let down occasionally, and fine marble parapets. The court occupied by the minister was the southernmost, or the lowest down the river Tigris; one side of which contained a showy hall of audience, and the other three sides were appropriated to stables for his horses, barracks for his ordinary guard, and apartments for some of his officers. The intermediate square between the paça's apartment and the Kiah's, contained the barracks of a corps called the Tiffungees, and the stables of the Georgians of the paça's household, sheds for the artillery, and barracks for the artillerymen and bombardiers. The tops of all these buildings were furnished with parapets, on which troops could stand either for show or defence.

" On the day appointed for the reception of the Wahauby envoy,

nothing was omitted which the Turks thought could tend to give him a proper idea of the paçha's splendour and power; and the etiquette of that court was broken through by the appointment of Kiah, who was a paçha of two tails, to attend this envoy to his audience of Suleiman. The envoy entered the precincts of the palace in the square belonging to the Kiah; there the horses in rich furniture were standing at their pickets, and the minister's guards and household gaily habited, filling the square and roof of the buildings. In the next square the Tiffungees were all drawn out, the paçha's horses standing at picket, the cannon run out from under their sheds, and the artillerymen and bombardiers standing by them; besides which, in this square, were several of the paçha's Georgians, mounted on superb horses, and magnificently clothed, playing at the jireed. At the gate of the paçha's court, which is something like a *porte-cochère*, were Caupoujie Baçhi, and all the officers belonging to his establishment, superbly dressed, who all walked a few steps from the gate to receive the Kiah and the envoy.

"I had been desired to reach the palace previously to the envoy's entrance to the paçha's apartments, and I had done so very willingly, for I was exceedingly anxious to see as much of this extraordinary ceremony as I could; from the entrance of the paçha's court to the foot of the steps which lead into the room where the paçha was sitting, a double row of Georgians, richly dressed, with the Kasnadar Agasi or treasurer at their head, were placed; and between them the Kiah and the envoy walked, till the Kiah arrived at the corner of the open room where the paçha was sitting above, and then he stopped immediately under his chief: the envoy proceeded towards the foot of the staircase which led into the room, and the high officers of the paçha's household prepared to perform the customary compliment of taking the envoy under the arms to assist him in mounting the stairs; this however he did not permit them to do; but with great gravity and dignity, unsupported, marched up the stairs, entered the room, and before any further ceremony could take place, sat himself down at a small distance immediately opposite the paçha, and addressed him in Arabic as follows:—'Hoy Suleiman! peace be on all those who think right. Abdul Azis has sent me to deliver to you this letter, and to receive from you the ratification of an agreement made between his son, Saoud, and your servant Ally; let it be done soon, and in good form; and the curse of God be on him who acts treacherously. If ye seek instruction, Abdul Aziz will afford it.' This ended, the envoy, to the utter astonishment and apparent confusion of the paçha, rose, and departed; and what will be scarcely believed, this strange scene was represented to the court of Constantinople, as if Abdul Aziz had sent a person to Bagdad, to solicit as a favour from the paçha the fulfilment of the Kiah's agreement with him. There was nothing in the dress of the envoy different from that which is worn by the commonest Arab of the desert; and the contrast between the splendid display, silken robes, furs, and diamonds of the paçha, and the mean attire of the Arab, was in perfect keeping with the rest of the scene; and so indeed was the letter which the envoy delivered to the paçha from Abdul Aziz, for it was written on a piece of paper not of the cleanest, and about four inches square. On leaving the paçha, I visited the Kiah, whom I found much chagrined at what had passed, and evidently regretting that I should have witnessed it; he said peevishly:—'the Ouzbegs may be proverbial for bad manners, but the Arabs beat them all to pieces.'"—Pp. 20—27.

The Wahauby chief must have advanced rapidly in power, for we see him in 1804, in possession of Mecca itself. The acquisition of territory, and acknowledgments of submission which Saoud had received from the inhabitants of the westean side of the Persian Gulf, and the northern side of the Red Sea, had created a very fierce and savage race of pirates, who carried their audacity to such a pitch, as to attack British merchants' vessels.

The capture of the merchant ship, *Minerva*, and the barbarous circumstances respecting it, at length roused the vengeance of the the British Government at Bombay, which had for so long a time submitted to the insults offered to it by the Wahauby pirates. An expedition of considerable force is therefore entered upon, and com mitted to the care of two officers, Colonel Smith and Captain Wainwright, of H. M. ship, *La Chiffonne*, the results of which were to cool the ardour of the maritime Arab tribes, in supporting the Wahauby government, and to inflict the first mortal wound on its power.

The glory of putting an end to the reign of these reformers and enthusiasts, was reserved to Mahommed Ally, Pacha of Egypt, and his two sons, Toussun and Ibrahim Pacha, contrary to the general expectation and predictions of the Mahommedans.

Mahommed Ally was appointed Pacha of Egypt in 1804, and the point on which the greatest stress was laid, in the instructions which he received from the Porte, was to attempt the re-conquest of the Holy Cities from the Wahauby. Mahommed Ally immediately entered with all diligence upon this undertaking, in which he received great assistance from the experience and judgment of Seyd Mahommed el Mahrouky, one of the principal merchants at Cairo, to the care of whom he intrusted the negociations and arrangements with the Bedouins in the neighbourhood of the Red Sea. The state of things in Egypt at that time, caused the Pacha to commit the first expedition against the Wahauby to his son, Toussun Bey, assisted by Ahmed Aga, his treasurer, and Seyd Mahommed el Mahrouky; and in order that the expedition might possess the power, if necessary, of confuting as well as conquering, two learned theologians of Cairo were ordered to join it. We shall not follow the author in his description of this expedition, but suffice ourselves by informing the reader that it did not end much to the credit of Tousson.

Mahommed Ally spent the whole spring and summer of 1812, in repairing the losses his son had sustained, and in preparing another expedition. In the month of October of that year, Toussun Bey, thinking himself sufficiently strong to make a second attempt on Medina, set out for that city, advancing by the same route which the year before had witnessed his defeat: he was entirely unmolested in his journey, and arrived under the walls of Medina without having received the slightest opposition. There is no account given of the inactivity of the Wahauby general on this occasion,

the author thinks it probably arose from a confidence in his own power, and from the contempt of the Turks which his late victory at Tedeedeh was but too likely to inspire ; especially as his authority and reputation were extended by it among the northern Arabs. Frequent skirmishes took place, under the walls of Medina, between the besiegers and the besieged, which ended in the latter being driven into the inner town, which is guarded by a strong, high wall, and a species of citadel or fortified castle. After a siege of fourteen or fifteen days, a breach was made in the wall, by means of a mine, which exploded, while the Wahaubys were at prayer, who, being thus surprised, fled to the castle ; but in this attempt many of them were butchered in the streets, whilst those who arrived at the castle were, in a few days, obliged to capitulate on account of the want of provisions, and most of them were massacred.

An expedition under the command of Mustapha Bey, brother-in-law to Mahommed Ally, advanced, subsequently, to the taking of Medina, from Yembo towards Jedda and Mecca ; both of which places were soon taken by the victorious arms of Mustapha. Notwithstanding all this, the power of Saoud was only so far broken as it was affected by the five chief cities of Hedjaz being in possession of the Turks. But the advantages Mahommed Ally had obtained were sufficient to repair to the scene of action, probably under the hope of securing to himself the honour and reputation of entirely destroying the Wahauby power. He therefore resolves upon another expedition, in the description of which the author gives a very interesting account of an Amazon of the name of Ghalye, who headed the Begouin Arabs, being widow of one of the chief men of that tribe. In this expedition Mahommed Ally appears to have had very little real success before the year 1814, when, in the month of May in that year, the Wahauby suffered an irreparable loss in their able and indefatigable prince, Saoud, who was carried off by a fever. The military policy which Saoud had pursued, and which he, on his death-bed, strongly recommended to his son, Abdullah, who, during Saoud's life, had been chosen by the Wahaubys to succeed his father, was never to attack the Turks in open plains.

The death of Saoud was followed by some of the great shaiks assuming airs of independence, on perceiving that the government had passed into feebler hands than those which had hitherto wielded it ; for although Abdullah was superior to his father in courage and skill in war, still he was far inferior to him in managing the political interests of the different tribes under his command. Thus, the southern tribes of Wahaubys, who were most exposed to the attacks of the Turks, frequently received no assistance from the northern tribes, and Abdullah either wanted power or ability to adjust the differences which were taking place between the southern shaiks ; but it is probable, that nothing was so fatal to Abdullah

as the contempt in which he held the Turks. Various skirmishes are related by the author to have taken place, in which, first one party and then the other had the advantage; but the most serious one took place at Bahra, a small town between Mecca and Jedda, which the Wahauby took possession of, and massacred all the inhabitants. From this and several other victories which the Wahaubys at this time gained over the Turks, it appears that the affairs of the latter must have been in rather a critical condition, but a seasonable reinforcement of cavalry from Cairo placed them again on an advantageous footing. They had been drawn from the Lybian tribes of Bedouins, who, during the summer season, encamp in the valley of the Nile. Eight hundred of them were well accustomed with the Wahauby system of warfare, both horse and man being equally inured to fatigue, and each cavalier having with him a camel carrying provisions for distant expeditions. Mahommed Ally Pacha was enabled, by purchase, in Syria, and by pressing into his service the pilgrim caravans, to collect together from seven to eight hundred camels, besides which, the Egyptian caravan brought him a reinforcement of 1,000 Turkish cavalry. He determines that the whole of these camels should be employed on military service.

"It was at this pilgrimage, that the favourite wife of Mahommed Ally, and who was the mother of Toussun, appeared in such splendour; having four hundred camels to transport from Jedda to Mecca her baggage and tents, which she pitched at the foot of Mount Arafat. But the most splendid as well as the most useful pilgrimage ever performed by a lady, was that of Zobeideh, who makes such a figure in the Arabian Nights as the wife of the Caliph Haroun al Rashid; for she not only caused wells, at an immense expense, to be opened at every stage between Bagdad and Mecca, but also built near them towers of defence, in which afterwards garrisons were placed, and maintained at her expense. The pilgrims were this year supposed, altogether, to amount to upwards of 80,000 persons."—P. 86.

It was now that the Pacha made known his resolution of putting himself at the head of his army, and of again attacking Taraba. He had twelve pieces of artillery, against whose fire it was not thought that the walls of Taraba would long stand: but we shall give the author's own description of this campaign.

"The campaign began in the true Turkish style; thirteen Bedouins, of the tribe of Ateybe, who were proceeding to Jedda for the purpose of purchasing provisions, were seized, and by way of inspiring the troops with a consciousness of their own valour, were executed on the plain near Mecca, in presence of an immense multitude of spectators. The execution, indeed, whatever encouragement it might give the Ottomans, drew from the Meccan spectators curses and hisses on the perpetrators.

"Ahmed Aga, who has been before noticed, left Mecca on the 15th of December, with the major part of the infantry, and proceeded at once to Kolach, whilst the paçha intended to follow him on the 24th. But news arrived that a strong Wahauby force had been seen in the neighbourhood of Gonfonde, apparently advancing towards Jedda. This at first created

considerable alarm, which however subsided when it was known to be only Shaik Tamy's men, who had their tents near Gonfonde.

"Various and varying were the reports which reached the paçha, between the 24th of December and the 7th of January, 1815, on which day the paçha actually marched from Mecca with all the troops that he could muster, proceeding towards Kolach, where the different chiefs of the army were already assembled, and where provisions, calculated to be sufficient for fifty or sixty days, were collected. When the paçha reached his second station at Zeyme, messengers, sent in haste from Kolach, brought him intelligence that a large body of Wahaubys had seized on the town of Byssel, which lies between Kolach and Tayef, and thus had interrupted the communication between those places; and that another body was making an incursion on the Arabs friendly to the Turks to the eastward of Kolach. Notwithstanding this, the paçha hastened his march to Kolach; and on the next day proceeded towards Byssel with the whole of his cavalry. He found the Wahaubys encamped on the side of the mountains, which open towards the plains of Kolach, in a force computed at about 25,000, but with very little cavalry, and no artillery of any kind. But most of the potent Wahauby chiefs were to be found in this encampment; and it now evidently appeared that the attack on Gonfonde had been made with an intention of drawing off the paçha's attention from the main object of attack, which was Byssel, where they now occupied a strong position, in the very centre of the Turkish lines. As the Turkish cavalry approached, the Wahaubys kept their position on the mountains; but repulsed an attempt made by the paçha, to plant one of his field-pieces in a situation to annoy them. The day was passed in skirmishes, in which the Turks lost about twenty of their cavalry, slain by the spears of the Wahauby horsemen.

"The effect of these transactions was, that several of the Bedouins in the paçha's service, and cowardly Turkish soldiers, deserted, and fled back to Mecca, where, by the reports they spread, they created intense alarm.

"Mahommed Ally soon perceived that as long as the Wahaubys maintained their position on the mountains, he had no chance of success against them, and he also knew that situated as he was, delay would be as dangerous in its effects to him, as it would be advantageous to his enemies. In the night he sent for a reinforcement from Kolach, and posted 2,000 infantry with artillery on the flank of the Wahauby. When the morning broke he renewed the attack with his cavalry, and was again repulsed. He then had recourse to stratagem which succeeded to the utmost of his wishes: he directed the column in flank to move nearer to the Wahauby camp, to fire off the artillery, and then retreat in seeming confusion. The Wahaubys pursued what they imagined to be fugitives; thought the hour was now come which was to bestow victory on their arms; and fatally forgot the last words of their great prince Saoud when dying. The Wahaubys had now reached the plain, and were sufficiently distant from the mountains to encourage the paçha's meditated attack. He rallied his cavalry, faced his pursuers: the battle was soon decided in his favour, and the slaughter of the Wahaubys commenced: and as six dollars was the price proclaimed for each Wahauby head, we may easily imagine that the Turks carried on such traffic with vigor and spirit. It is said that in a few hours 5,000 heads at this price, were laid at the

paçha's feet, and the hostile camp, baggage, and camels, became the prey of the Turks; whilst many of their principal chiefs escaped from the field of battle with difficulty; and it is considered extraordinary, that near three hundred Wahaubys were reported to have accepted the quarter which was offered them at the express command of the paçha."—Pp. 87—90.

The author goes on to observe, that there can be no doubt that the misfortunes of the Wahaubys were caused by allowing themselves to be drawn into the plain; and if it could for a moment be imagined, that a Turkish pacha could condescend to acquaint himself with the language or history of the Giaours, he might gratify his pride by comparing the victory at Byssel with Cromwell's famous battle of Dunbar, where, on observing the covenanters descend into the plain, he foretold that the Lord had delivered them into his hands. The Wahaubys had imagined, on seeing the retreat of the artillery, and the apparent confusion of the Turkish army, that they should finish the war at once by the capture of the pacha; but hope often makes dupes of nations as well as of individuals, and is never more likely to do so than when the prospects she holds out are apparently the most alluring. The action at Byssel led to the fall of Taraba, from which Fayal, Abdullah's brother, fled at the approach of the pacha; the inhabitants being thus abandoned by their allies, capitulated, and the pacha here fixed his head-quarters, whence he, in a short time, removed to Beishe, where he was joined by many Bedouins, for all that were discontented with the Wahaubys, now came to seek redress from the pacha.

It may easily be imagined, that a serious impression must have been made on the resources of the Wahaubys; when the battle of Byssel took place, Abdullah headed a small quantity of troops in the province of Kaysm, in order to oppose Toussun Pacha should he advance from the side of Medina, where he was then stationed; but, on hearing the disastrous result of that action, he returned to Dereyah, thinking that probably Mahommed Ally Pacha might direct his march towards Nejd, which he might easily have done from Taraba. Many of the northern tribes now offered to join Toussun Pacha, who, encouraged by these brilliant prospects, determined to project the conquest of Nejd, the result of which was, his entering into terms of peace with Abdullah, but which his father prevents being ratified at Constantinople.

Another expedition, under the command of Ibrahim Pacha, another son of Mahommed Ally, was directed, in 1816, to march to Dereyah. This force consisted of about 2,000 infantry, and 1,500 cavalry, all choice men. To this general was reserved the complete overthrow of the Wahaubys; but to describe the different marches and skirmishes of the two parties until 1818, would only be to repeat what has been already said; we shall content ourselves in observing that, after the fall of the capital, and a subsequent desperate battle, Abdullah Ibn Saoud, with his women and trea-

sures fell into the hands of his enemies, and that, being sent to Constantinople bound in chains, he was put to death in that city, together with his women, and the bodies exposed to the indignities of a fanatic and enraged populace.

The author then enters into a detail of the spiritual and political government, and religious opinions of this extraordinary sect; but we regret that we are unable to follow him through it. The work is written in a most pleasing style, and abound in most copious and interesting notes, and we trust that this is not the last time we shall have the gratification of encountering the author in our present capacity.

ART. IV.—*Croly on Divine Providence; or, the Three Cycles of Revelation, showing the Parallelism of the Patriarchal, Jewish, and Christian Dispensations. Being a New Evidence of the Divine Origin of Christianity.* By the Rev. GEORGE CROLY, LL.D, Rector of Bondleigh, Devon. 1 vol. large 8vo. London: James Duncan, Paternoster Row. 1834.

THE Reverend author of this work has been known to our readers heretofore, in the character of a candidate for the laurels of poetry, and it is not without much pleasure that we find him converting his energies at last to the high and mighty purpose of sustaining the evidence of the Christian religion.

Mr. Croly reminds us at the outset, that there are a great many volumes in existence in this country, devoted to the illustration of the works of God.

In these works, two distinct general forms of argument are adopted; the first consisting of evidence from the facts of history, and the latter from evidence gathered from human nature. How it is Mr. Croly's conclusion, as far as experience goes, that the spirit of scepticism, though it is unable to refute, yet finds from both a perfectly easy refuge. For example—when the circumstances are taken, which show the spread of Christianity from the obscurity of its origin, and the simplicity of the means by which that distribution was effected, the infidel antagonist may meet us with this reply,—that the extraordinary changes produced on the scale of nations, is an equivalent for the phenomenon which we have put with respect to Christianity, and he will point in an especial manner to the religious revolutions in the eastern world. In this case, all that the defence accomplishes for the enemy of religion, is to protect him from the necessity of acknowledging a defeat; and the state of mind which is to be found in all sceptics, is precisely of this imperfect nature.

The argument deduced from human nature, and the natural processes which are operating under the eye of man, is that which

forms the subject of development in the Bridgewater treatises, and before them in the works of Ray, Durham, and lastly, of Paley; and as that argument is more circumstantial in its nature, and as it involves a more extended chain of successive inductions from preceding premises, it necessarily follows that it is more capable of being parried. This argument is thus put forth by that celebrated writer in the two following propositions :—

" 1st. That there is satisfactory evidence that many, professing to be original witnesses of the Christian miracles, passed their lives in labours, dangers, and sufferings, voluntarily undergone in attestation of the accounts which they delivered, and solely in consequence of their belief of those accounts, and that they submitted, from the same motives, to new rules of conduct: 2dly, that there is *not* satisfactory evidence that persons professing to be original witnesses of other miracles, in their nature as certain as those are, have ever acted in the same manner, in attestation of the accounts which they delivered, and properly, in consequence of their belief of those accounts."—P. 9.

How that these propositions are undeniable, will be implicitly accepted by the Christian; but it is perfectly obvious that, in order to submit to such a truth, he must previously have been a conscientious Christian. Thus it is the opinion of the reverend author that, whilst no Christian can read Paley's volume without feeling his faith strengthened. But he shrewdly adds, that it may be questioned, whether it ever converted an infidel, its proof being too elastic to bind the stubbornness of an infidel.

In the next place, the best argument hitherto adduced, is that arising from the consecutive nature of the three dispensations; for all that can be required for supporting the evidence of the Christian religion is, to prove that it has its origin from God. When that fact is established, the Christian doctrines and promises must be received precisely as they are taught. But then so much discipline is required, so much serenity of inquiry, and so much chastisement and bridling the passions and temper, are essential to the understanding of the succession of these three, that there is no hope that the characteristic indolence of scepticism will always be sure to avoid it.

Such being the imperfect state of the science of Physico-theology, Mr. Croly has been at the pains of finding out another argument, which differs altogether in its form, and, what is better, in its principle. As this part of the performance is the great and just object, we deem it most convenient to give his own prospectus of the course of his arguments and his illustrations.

" Its object is to prove that 'Christianity is the direct work of Providence;' and this, not by any mere probability arising from its original weakness and subsequent power; nor from its moral superiority; nor from the sufferings undergone by sincere minds in its cause; nor even from its prophetic testimonies; but from the comparison of facts acknowledged by all, without reference to religious opinion. It will be shown

that the leading facts of Christian history have been the leading facts of the two former dispensations, Judæism, and the Patriarchal religion; and that those facts have occurred in the three, not merely in essence, but with the same purpose, and in the same order: yet that no mere dry sequence has been observed in the order of the respective dispensations, but that they have received in each those slight variations of shape and colour which exhibit a supreme adapting hand, varying the process, but distinctly preserving the principle.

"Those facts in the Patriarchal dispensation, were,—that man first remained for a certain period in a state, of which little more is known than that he existed—that he then became the father of two sons—that they offered sacrifices, of which one was rejected, and the other received—that the elder slew the younger, was deprived of his inheritance, and exiled for ever—that a third son was born to supply the place of the slain brother—that he became the founder of a sacred line—that his descendants grew corrupt—that they were swept away by a great, direct act of Divine justice—that a remnant, who had adhered to virtue, were preserved by the Divine interposition—that from a state of suffering and desolation, they were suddenly raised into boundless dominion, and became the regenerators of the world—that a new apostacy arose, grew singularly powerful, crushed the pure family of the Patriarchal house, and, finally, was in its turn crushed by a direct interposition of Heaven. It will be shown, that all those facts have been gone through *twice* subsequently, in the Jewish and Christian eras, with attendant circumstances, proving that Providence continued to exercise a constant provision for their performance, and for their suitableness to the necessary changes arising from three states of mankind so totally distinct as those of the Patriarchal, the Jewish, and the Christian world."—Pp. ix—xii.

We entirely agree with our able guide, that if this proof can be established, it puts an end for eternity to the cause of scepticism, and though it may obstinately persist in its hostility to the truth, it must do so under the fatal disadvantages of having no basis in reason to sustain it. And the reason is, that if such a system of moral parallelism be proved to have existed, and that it maintained itself broadly, plainly, and in an unbroken manner then, assuredly, we never can suffer, even the bare conception to be harboured in our minds, that such a phenomenon could be the mere product of chance. Hence, then, if this system be true, it follows, as a necessary consequence, that the existence of some CAUSE, some powerful Author has given Christianity to man, and that this is a proposition that may be demonstrated with the same certain effect as the properties of the triangle.

For the purposes contemplated by the author, he divides the work into three cycles. In the first, we have a commentary of the principal facts which bear on the question, for an historical term that extends from the creation, to that era succeeding the Deluge, which is marked in the sacred annals, by the phenomenon of the confusion of tongues. In the second cycle, which is the intervening one, its extremes are the period of the call of Abraham down to the time of Constantine; whilst the third cycle is wholly spiritual, the

two former cycles being either more or less addressed to the senses. Before entering into the details which are so copiously furnished by the author, we may as well inform the reader, that it is totally out of our power to give even a brief summary of the whole argument. The reader, therefore, must be contented with such specimens of the merits of this extraordinary work as we can select, consistently with the circumstances in which we are placed.

In the two first chapters is given a very full and detailed account of the process of the Creation, by a series of varied illustrations drawn from the sciences of Astronomy, Pneumatics, Botany, Comparative Anatomy, as well as Human Anatomy. These illustrations, as applied by Mr. Croly, exhibit in that gentleman the possession of an immense and accurate acquaintance with the more exalted sciences. He then proceeds to a similar description with respect to the planetary worlds, and, in a fine chapter on the Mosaic Geology, he has collected a very complete and lucid summary of the principles which are now recognised. It appears that what is now understood as the result of geological investigations, may be thus capitulated; first, that the world was primarily a chaos, that matter first consisted in elementary particles; that the form it now assumes was effected by the ordinary course of nature; and, that as great periods of time elapsed in producing such innovations as now exist, consequently the production of such forms must be of a long duration. We are, however, permitted to inquire of such precipitate theorists, in the first place, whether their assertion is authenticated by the existence of any historical ground for this chaos, beyond some fragment of ancient poetry, or some mysticisms of the oriental world, equally preposterous and incomprehensible. Can they show us that the known materials of which, they say, the earth is composed, have any reference to time? Do granites, or coals and metals grow? or, if they actually do, must not the progress of their growth be so immeasurably slow as to occupy periods absolutely embarrassing to the geologist—not tens of thousands—but millions of years? Or, whether the laws of bodies do not regard or depend upon the forms of bodies; and, to that extent, unable to act in a confusion of elementary particles of every kind? Or, whether if they acted at all in a world of particles, thus equally comminuted and disunited, they were not more likely to have remained in the same state of confusion for ever? Or, whether there exists any certain process in nature by which the elementary particles of caloric, for example, immersed in an extensive and fervent colluvies of water, clay, earths, metals, and the numerous and various adverse compositions of the earth, could discover each other, force their way through a mass as large as a globe, and coalesce into flame? On such subjects as the foregoing, the absolute ignorance of mankind with respect to the principles of nature, necessarily throws him back to the evidences of the senses: he has nothing else to rely upon. We thus allow of the growth of the

sand-stones, because the evidence of our senses places it beyond the possibility of a denial. When evidence equally substantial is produced with regard to the other processes, we shall conclude that they are effected by the course of nature. Till then, deprived of our only security to natural knowledge, we rightly withhold our conviction; yet, if the decision is to be pronounced from a reference to authority, we have the names of the greatest philosophers of the universe in opposition to the chaotic theory. These men, it is almost needless to say, are Newton and Bacon.

In the declarations of the two most profound thinkers, that, perhaps, ever existed, the most decided contradiction is given to the fantasies of the modern theory. Newton has recourse more particularly to the point in question; the giving of suitable forms to the masses of particles; Bacon, to the general furnishing of the surface: but both are equally assertors of the authority of sacred history.

A subsidiary argument advanced by foreign geologists is, that the remnants of fishes retain the lowest position in the strata; those of the paleotheria and other extinct animals the next; and those of elephants and the other living races, that nearest the surface. To prove this statement more satisfactorily, it is insinuated that those deposits remain in the same relative position every where, and that, in reality, they form something nearly approaching to concentric coats round the globe. Thus the theory is, that there was a fish world succeeded by a paleotherian world, followed again by a wild bear world; and all those before the Mosaic period of the Creation. This is barely a specimen of the phrenzy of foreign philosophy for generalization. The fact is, that those deposits are extremely irregular, and the strata in which they lie so few, and so widely interrupted, that it would be an absolute inconsistency to consider them as forming any important integuments of the globe. But are we at all physically allowed to form conjectures of this enlargement of the globe by successive concentric layers? Whence was the material to be derived? Are we authorised to believe that a single ounce of matter has been added to the general mass since the time of its creation.

The next attempt to invalidate the history applies to the Deluge, which is considered by foreign geology as wholly incompetent to account for the phenomena of the earth's surface, hitherto attributed to its operation.

But in this case, the difference of opinion lies between such as misconstrue the record. Till nearly the present time, it was too generally the custom to refer all the deposits and disruptions of the strata to the Deluge; an assertion never put forward by the history, and for which it is of course unaccountable. It is stated by the foreign geology, that beds of sea-shells have been discovered on the tops of mountains and in other places, in which a twelvemonth's continued flood could not have deposited them; and that remnants

of fish and shells have been found in the soil in such a perfect state, as to prove that they have been placed in a bed of tranquil water during a long period of time. It further adds, that four general strata are perceptible in the exterior of the globe, a tertiary or that stratum which covers the surface, and which is adopted to cultivation, &c.; a secondary, or sedimentary under it, exhibiting the long action of water and containing plants and bones; an intermediate or fragmentary, consisting of portions of shattered granite, agglutinated by time and forming solid masses, as millstone grit, and budding stone, and sometimes but seldom exhibiting organic remains; and below this bed, a fourth, the primary or chrystalline, the most solid bed to which we have penetrated, and which contains no organic remains. Admitting, a moment, this system of stratification, the scriptural geologist will not concede that any fact of the disruption militates against the record. The defenders and opposers have equally overlooked a statement by which we can fully account for all the phenomenon of deposit and disruption—the command of God, on the third day, that a portion of the globe should be hollowed for the sea-bed; thus laying a vast extent of the earth's surface under water, for the intervening space between the Creation and the Deluge, and that portion at the recovery from the Deluge, forming the now existing dry land. On this subject the principal geologists unconsciously sustain the history.

The sacred history fully agreeing with this statement, prescribes the period during which the ocean bed occupied this portion of the globe. Agreeable to the chronology of the Septuagint, it was no less than 2256 years, a period sufficiently long for the whole sedimentary process, the tranquil deposit of those marine substances which we find preserved in the soil, and to which we know a deposit of the same kind is now making in the bed of the sea. In this ordination of things, we have another proof of the perpetual care of Providence. Though the original bed of the sea was broken in by an operation, whose rapidity implies and demonstrates its violence, we now know that the disruption was ordained for the future benefit of the inhabitants of that gulf, when it should be raised from the ocean and become dry land.

The fracture of the strata by that concussion, was necessary for the inhabitants of the post diluvian world: for owing to those mixed and unequal positions of the surface, we now enjoy the advantages of springs, an access to minerals, diversities of soils, and numerous other benefits. Nothing is more manifest than that the chains of mountains, the valleys, the channels of rivers, and the features in general of our continents, whether formed at the sinking of the ocean bed, or at its rising, after the overflow of the Deluge, were shaped directly with a view to the subsequent utility of the living world. The mountains administer perpetual irrigation to the lands contiguous to their base, the valleys are sunk for the purpose of receiving the soil worked down from the mountain.

Channels are designedly scooped out by Providence, both with a view of fertilizing the earth, and affording the means of communication.

Every objection vanishes before the veracity and consistency of the Mosaic history. But geology is libelled by those objections; they spring from another source; namely, cosmogony, a charlatanism, having the same resemblance to geology, which astrology bears to the true science of the stars. Geology is yet too feeble to venture upon system. Its wants energy, precision, and consistency to establish a theory. Instead of proposing to teach us the constitution of the globe, it should be brought to a confession, that after fifty years continuance, it can produce nothing but trivial circumstances, collected by loose inquiry and arranged without order. The millionth's part of the earth's surface, has not yet been examined. A. De Saussure has investigated the Alpine districts; specimens of some of the fissures of the Andes, have been collected by a Humboldt, the heights of the Siberian chain have been mineralized by a Pallas; the Saxon mines have been examined by a Werner; the chalk-pits of Paris have been visited by a Cuvier; a summer's excursion to the Monte Volca, or to Maestricht, has supplied some philosophers with remnants of shells and fish-bones. At this rate, five hundred years would not be time enough to examine one quarter of the globe. Who has given the geology of Africa, Arabia, Persia, India, Tartary, or the Northern and Southern America? Are these the feeble researches of human observation, to be set forth in opposition to the divinity of the Scriptures? Man cannot possibly penetrate deeper than a mile into the recesses of the earth, and this is to let us into the secret of a structure, eight thousand miles in diameter. No one, who has any pretensions to the name of philosopher, can be insensible to the inadequacy of geology to purposes of this nature.

The "theories of the earth," would form, according to the present mood of the mind, one of the most ludicrous, or most saddening chapters in the history of the human mind. The successive worlds "of Cuvier" will soon fall to the dust, where so many of its predecessors have been obliterated. Still, the progress of empiricism advances, and one infidel absurd notion succeeds another, until geology finds that bare conjecture is not science, and that her place is to gather facts, and leave the fiction and fabrication of worlds to sciolists and novelists.

The following list of cosmogonies, by names of once honoured distinctions, is calculated to show what errors men of sharp intellects, of comprehensive knowledge, may fall under the total guidance of vanity and presumption; and a short date may befall systems, which claim to live for ever. To begin with Burnet, one of the most renowned and eloquent builders of words, and also one of the most rational.

"The earth," says he, "was first invested with an uniform light crust, which covered the abyss of the sea, and which being broken

up for the production of the Deluge, formed the mountains by its fragments."

Woodward says, "The Deluge was occasioned by a momentary suspension of cohesion among the particles of mineral bodies. The whole mass of the globe was dissolved, and the paste thus formed, became penetrated with shells."

Schenckzer says, "God raised up the mountains, to allow the waters of the Deluge to run off, and selected places, in which were the greatest quantity of rocks, without which, the mountains could not have supported themselves."

Whiston says, "The earth was formed from the atmosphere of one comet, and deluged by the train of another. The heat which it retained from its origin, caused its inhabitants to sin; for which they were all drowned, except the fishes, which being exempt from heat, remained innocent."

Leibnitz says, "The earth is an extinguished sun, on which the vapours falling down again, after it had cooled, formed seas, which afterwards deposited the limestone formations."

Demaillet says, "The earth was a fragment of the sun, struck off red hot by the blow of a comet, together with all the other planets, which were also red hot fragments. The age of the world can be reckoned from the number of years it would take to cool so large a mass to its present temperature. But, it is of course, growing colder every year, and will finally become a globe of ice."

Lamarck says, "All things were originally fluid; the waters gave birth to microscopic insects, in course of time, insects magnified into larger animals; animals in course of ages, converted part of the water into calcareous earth; the vegetables converted a portion into clay! Those two substances converted themselves into silex. All the solid parts therefore owe their existence to life, and without life, the globe would still be a liquid. This is the general way, among the German philosophers, of accounting for the formation and filling of the world."

Patrin says, "The earth is a great animal; it is alive; it has instinct and volition, even to the most elementary molecules, which attract and repel each other, according to sympathies and antipathies. Every mineral has the power of converting immense masses into its own nature, as we convert food into flesh and blood. The mountains are the respiratory organs of the globe! The schists are the organs of secretion; the mineral veins are abscesses; and the metals are the products of disease; for which reason, most of them have a repulsive smell."

Oken says, "All is done by polarization."

Delametherie says, "All is done by crystallization."

Thus far we are assisted by cosmogony in the origin of the globe, and thus far is philosophy contented with penetrating into the nature of things. The present state of the earth's surface exercises opinions of not less variety than value.

Hutton says, " The mountains are gradually washed down, and spread over the bottom of the ocean. They are there heated under an enormous pressure, and formed into strata, ready to be raised to the surface by the same enormous heat when necessary."

Lamanon says, "The water was first divided into lakes at various elevations, where, having done their work as depositors of layers of shells ; they began their descent, as down the steps of an amphitheatre, and, finally, found their way into the ocean."

Dolomien says, " All was the work of remarkable tides. Tides of seven or eight hundred fathoms deep, having from time to time carried off the matter laying at the bottom of the sea, threw it in forms of hills and mountains, upon the plains of the globe."

De Marschall says, " The earth is nothing but a heap of meteoric stones, which falling from time to time, in the course of ages agglutinated themselves together, and preserve the fragments of the different animals of the different stars, from which they were projected. And, this amply accounts for the fossil remains of unknown animals."

Bertrand says " The globe is a vast hollow containing an immense magnet, which is moved from pole to pole by the attraction of comets, thus constantly shifting the centre of gravity, and drawing up the waters of the surface after it. A process which accounts for deluges, tides, and every thing."

Such is the science ! But what is more remarkable is, that Cuvier, after admitting that geology had become ridiculous by performances of this nature, adds to the list, by a cosmogyny founded on the detection of the bones of lizards in the chalk-pits of Paris, which, as usual, perfectly establishes a succession of deluges, &c. ; and this step being gained, as perfectly accounts through them, for all deposits, fractures, stratifications, &c. &c.

It has been a continued subject of astonishment, that men of science and learning should be so totally unacquainted with religion ; and the reason has been sought in some natural disinclination of the scientific mind for moral evidence. This palliation is but feeble, a more just reason is, that the generality of learned men participate in forgetfulness, vanity, and follies of the world. If the greater number are Deists, it is because mankind in general acknowledge something above which regulates the seasons and maintains the world together. Christianity presents a testimony absolutely irresistible by the unprejudiced mind, as well to the man of science as to the unlearned. But it is useless to offer its testimony to eyes unwilling to see, or ears wilfully deafened, or minds too indolent or too vain to inquire.

The homage given to the philosopher should not derogate from the homage due to the Creator ; and that the world should not be prejudiced against revelation by folly covered with the cloak of wisdom.

It is impossible for us to follow the author through the remain-

der of the details into which he enters. It is merely necessary to say, that he altogether condemns the theories which he has now considered.

Thus far we find Mr. Croly setting up a decided opposition to the prevalence of the geological and physical systems of the present day; he rejects not only all the ancient speculations on the formation of the earth down to the present time, therein comprehending all that is scientific, all that is great and glorious, and successful in modern times. Even the great and immortal Cuvier comes within the ban of this Rhodomanthus. And yet how universally is it acknowledged that this illustrious naturalist never had his equal; that in point of sublime ability, in diligence and accuracy of research, in learning, and in short, in all the qualifications that are required for the most successful inquirer into natural history, he had no rival; and that all these endowments, all these elevated attributes, were not only assisted by the pure and exalted moral virtues which he possessed, but also served to reflect a resplendent glory upon his name.

We pass over several of the chapters in order to reach the series of remarks which Mr. Croly furnishes on the very curious subject, the longevity of the patriarchs. Upon this curious subject we must allow the author to speak.

"The physiologist has hitherto discovered nothing in the human frame, which should make a life of threescore and ten years more *natural* than a life of as many hundreds. He finds *no preparation* for determinate decay. Looking at the frame of man in health, nothing but the common knowledge, that all must die, could lead him to pronounce that the configuration before him was not immortal.

"He would, of course, feel that the delicacy and complexity of the mere mechanical structure singularly exposed it to accident; and he might well be astonished that the innumerable nerves and veins, the organs fine as a hair, and microscopic muscles, which act in some of the most constant functions of the frame, the exquisite fibres which suspend the lenses of the eye, or carry vibration through the chambers of the ear, should act, for fifty or a hundred years together, with the most unwearied and unerring precision. But he would remark, that this extraordinary machine possessed a quality, denied to all the works of human invention —the power of self-repair, a constant renewal of every distinct portion, substantially changing the whole material every few years, yet retaining its form and its uses totally unchanged. He would remark another provision still more remote, if possible, from the work of human ingenuity—a provision against contingency, a prospective resource against the fracture or the wound, which might never occur; a store which, if not required, remained in the frame, neither wasted nor superfluous. And in all those, which yet are the most common phenomena of the system, he would see the pledges of an existence, once actually prepared for unlimited duration.

"Unquestionably, there must be some physical cause for the rapid decay of life in our world; for the Deity executes his established will by established means. But the cause utterly evades human knowledge. No

principle in nature has hitherto been ascertained, by which the heart, that beats four thousand times an hour, for seventy or a hundred years, may not vibrate, impel, and pour, at the same marvellous rate, for a thousand. The probable source of our ignorance is, that the superiority of the machine transcends all calculation; that we have no data in the works of human skill for an approximation to the causes of decay in the works of Deity.

"If we are thus utterly unable to assign the principle of decay, who shall be entitled to assert the impossibility of an existence of ten times our duration? Nothing, in the researches of modern science, can authorize us to say, that some impalpable fibre added, or withdrawn; the infusion of some drop too subtle for human perception; might not make the entire difference between the age of Methuselah and threescore and ten; between the noble longevity that, transferred to a later time, might have stretched from the Norman conquest to this hour, and the confused and feeble fragment of existence that belongs to ourselves; between the knowledge that might have thus embraced the whole various and stirring drama of European history, and the narrow experience that sees but the shifting of a scene; between the magnificent power of vision that commands the birth and progress of polity, human and Divine, for a thousand years, and the eye involved in the vapours of its brief and giddy day, perplexed with knowledge, which a few years more will scorn as ignorance, and passionate for objects, which will be pronounced absurdities, or evils, before it is cold in the grave."—Pp. 216—219.

The author observes, that although a Christian might readily accept these facts, since they are only portions of the general doctrines with its accompanying statements which he has already consented to believe, yet the same assent is not likely to be given by the infidel, and it is to such persons that the intentions of Mr. Croly are evidently directed in the following paragraphs which succeed those just quoted by us.

"The *possible* longevity of the patriarchs thus cannot be denied; but its probability may be strongly argued from the advantage, perhaps the necessity, of possessing such depositaries as the patriarchs, for the transmission of the worship, arts, and natural knowledge, of the first ages. We have no evidence that writing was known before the Deluge. It might have been among those gifts of Heaven reserved for the use of the more active, diversified, and intellectual period, which was to open on the renewed world. But, without this incomparable art, there seems to be no expedient for preserving tradition but extreme length of life. To this purpose, as has been frequently observed, the ante-diluvian duration would be strikingly adequate. The lives of two patriarchs would reach nearly from the creation to the Deluge. And as each was the contemporary of five or six generations, (with the exception of Enoch,) the testimony would be delivered to his sons and his sons' sons, with the united authority of the priest, the chieftain, and the ancestor.

"The general circumstances which *transpire* in the narrative, are also strikingly consistent with this degree of longevity—the threat, for instance, of destroying all life at the end of a hundred and twenty years; which, perhaps, would but lightly affect the modern race of man, would

be one of the most formidable inflictions to a race, to whom it implied the cutting off nearly nine-tenths of the common duration of existence—the time of their children's birth bears nearly the modern proportion to maturity—the decreasing rates of life after the Deluge, from the 600 years of Shem to the 239 of Peleg, and the 175 of Abraham, are suitable to the idea of great previous longevity; the decrease itself being satisfactorily accounted for by the cessation of its use, from the improved opportunities of record, the extended establishment of worship, the more various and intelligent intercourses of man; and probably, most of all, from the evident intention of Providence at once to make the pressure of population less hazardous, and to produce a larger harvest of human existence; two objects, so apparently opposed, that their successful combination may be looked upon as among the most remarkable effects of providential wisdom."—Pp. 220, 221.

It is impossible for us to pass over the account afterwards given of the intervals during which the generations of the various patriarchs remained on the earth, and for the sake of brevity we have arranged the whole in the form of a table, which presents the facts in a brief but impressive manner.

NAME.	Period of his Generation in Years.	Years before Christ between which the interval ran.
Seth	205	1962 — 1757
Enos	190	1757 — 1567
Cainan	170	1567 — 1397
Mahaleel	165	1397 — 1232
Jared	162	1232 — 1070
Enoch	165	1070 — 905
Methuselah	187	905 — 718
Lamech	182	718 — 530
		B. C. A. D.
Noah	600	530 — 70

Such were the generations which existed before the Deluge, and during the last days just previous to the astonishing event; the building of the ark was undertaken, for the preservation of the patriarchal family. The purification of the earth had been now announced as an indispensable resource to avenge the rapine and sensuality of mankind. It was in the first instance promulgated, that the time of the destruction of the earth was fixed, and a verbal warning threatening an indefinite mode of ruin.

With respect to the narrative of the Deluge, it would appear, that the infliction of long suffering was one of its most immediate consequences, for the havoc could not have been sudden since its progress took up forty days. But what must have been the dreadful spectacle to appalled man under such circumstances? "How indescribably" writes our eloquent author. "But how indescribably strange, tumultuous and terrible, must have been the sudden check and subversion of all the pursuits of life in the general world; war, traffic, labour, festivity, all broken up together. The "man of

renown," the great barbaric chieftain, at the head of his myriads, hurrying to some new scene of spoil; and finding himself checked in the midst of his march, by the torrents from above, and the inundations dwelling from beneath; the long lines of primitive commerce, the rude caravans of the day, suddenly dissipated and driven to the mountains in terror; the tillers of the soil flying from their fields, and seeing their scanty harvests buried in a moment; the marriage and the festival; the extravagances of peasant revelry; the kingly rejoicing; the warlike triumph; the popular acclamation; the whole dissonant joy and turbulent emotion, the whole lavish magnificence, and profligate and prodigal energies of semi-barbarian life, suddenly dashed and suspended by a sense of universal and irresistible destruction."

Mr. Croly has a very curious chapter on the site of Paradise, and the question of its locality seems to have occupied the attention of men nearly to the same extent, and just with as little chance as the quadrature of the circle. Tradition, and local opinions, have fixed this site in Mesopotamia, and the natives there point out with veneration the marshy spot where the footsteps of our first parents wandered. The Indians transfer the garden to Eden; the people of Scandinavia insist that it was in their country; and even Iceland, and also the Fortunate Islands, have been made the site of the Garden of Eden. But after all, the result of ages of experience, of investigations and competition, is this, that Armenia, in all probability, particularly near the sources of the rivers Tigris and Euphrates, was the fortunate spot. In fact, there is no site more fit, according to its present claims to our admiration, to constitute such a retreat as Eden is described to be; for there we behold one of the valleys of its noble hills, even at this distance of time, in the language of our author, "rich and lovely, with a river pouring from the surrounding chain into its bosom, taking every shape of the fine diversities of the mountain landscape, alternately the lake, the cataract, and the stream; rolling through marbly glens, and forest dells, and sunny lawns, and the luxuriant embowerings of a land where flourished every tree, "good for fruit or pleasant to the eye." Armenia is still a country of remarkable beauty and fertility; though, from the loftiness of its mountains, suffering occasionally by severity of climate. But, on the supposition that instead of forming the table land of a continent, it was once an island, surrounded by an *extensive* ocean; the temperature would necessarily be much higher, and winter probably altogether unknown."

It is altogether out of our power to pursue, with Mr. Croly, the lengthened course of his arguments; but we cannot part with him before we state exactly our impressions of the value of his work. It is evidently a production of enormous labour and research, and it brings together a mass of facts authentic, and therefore undeniable. But then such results as these, any person who has the

necessary ambition and industry, may easily collect; he may do more, he may reason upon them, and just as his fancy leads him, he may express one opinion or another respecting the bearing which they may have. But able and plausible as the author is, abundantly as his supply of resources, yet, we can never forget who the persons are whom he selects for his antagonists. In the first place, they are men who have been all their lives any thing but theorists; the one and the other have devoted a great portion of their existence to the practical examination of the facts, and of the conclusion at which they arrive.

These circumstances which belong both to Cuvier and to Buckland, will undoubtedly make the public think that the latter possess the greatest claims to respect, while Mr. Croly, much their junior in every category that can apply to this subject, much their inferior in point of capacity, and not at all to be compared to either in the extent of the devotion given by each to the subject at issue; Mr. Croly, we repeat, cannot expect that he can do much by his own personal influence, in undermining that of such men as Cuvier and Buckland. With respect to the force of his arguments against their views, as strong friends to them and their opinions, we are but too happy in leaving the question to an enlightened public.

ART. V.—*Origines Biblicæ: or, Researches in Primeval History. By* CHARLES TILSTONE BEKE. Vol. 1., 8vo. London: Parbury, Allen, and Co. 1834.

THIS is a Work, in the compilation of which, the author has shown a depth of research which few have equalled, and probably none have surpassed. His object is to establish, upon a correct and undeviating principle, the Geography of Sacred History; for it is not to be denied, that many difficulties and discrepancies exits with regard to it, which cannot either be reconciled to one another, or to obvious reasons, and which also afford to the adversaries of Revelation, advantages that would instantly be extirpated, were this object accomplished. He conceives that these errors arise from allowing the judgment to be controuled, in the investigation of the Scriptures, by Heathen authorities, instead of taking the Scriptures themselves as the basis upon which all history is to be founded; and as it is of importance to possess correct ideas, respecting the nature and extent of this error, he shows its origin, progress, and continuance down to the present time. The localities of the countries in which the occurrences mentioned in the Pentateuch took place, continued to be well known to the Israelites, in the ages which immediately succeeded that period; and both by tradition, and the means of communication then existing between Israel and the surrounding nations, it is probable that the remembrance of them was preserved, until a late period of their national existence. The time at length

arrived when the wickedness of the Israelites had increased to so high a pitch, as to draw down upon them the wrath of the Almighty, and ultimately to cause their destruction as a nation; when their moral and religious blindness was only equalled by their intellectual darkness. The words of the Law, had become entirely unknown to them, as we learn from 2 Kings, xxii. where it is stated, that in the eighteenth year of Josiah, king of Judah, the Book of the Law was found (accidental it would appear) by Hilkiah the high priest:—" and Shaphan" (the scribe) "read it before the king. And it came to pass, when the king had heard the words of the book of the law, that he rent his clothes," ver. 11. The geographical information of the Israelites must, at this period, have been at a very low ebb. When, however, the Sacred Volume began again to be studied by them, it is natural for them to be desirous of acquiring some definite knowledge concerning the situations of the many memorable places to which their natural history refers. Their means of arriving at just conclusions on this subject were defective. In their search after this knowledge, they were no doubt aided, in many instances, by the natural localities, by architectural remains, and by other distinguishing marks; but in the majority of cases, they must have been left to draw deductions from the Sacred Writings, which deductions must, in a great measure, have been founded upon the perverted and erroneous notions of history and geography, which they had either acquired in the countries of their captivity, or adopted from the Egyptians and Greeks, with whom they were brought into immediate contact. The system of geography thus established among the Jews, was naturally received and adopted by Jewish translators of the Septuagint version of the Old Testament, and we accordingly find that they have translated the names of the various countries and places recorded in Scripture, in conformity with the notions which were prevalent in their time amongst their countrymen. The authority of this version having been received by the Christian Church, it will be perfectly understood, how the erroneous system of geography established amongst the Jews, should have been followed during the first ages by Christians also: but it is inconceivable how an error so capable of detection, should have maintained its ground until the present time; and this too, not only amongst those who have been satisfied to receive the scriptural history as it has been presented to them, but also amongst those who, professing to interpret the statements of Revelation by the (to them infallible) light of human reason, independently of all authority, whether human or Divine, have afforded the most complete proof of the imperfection and fallibility of that reason.

Agreeing, as all who have considered the subject seem to feel themselves bound to do, in the general notion of Sacred Geography, promulgated by the Jewish translators of the Septuagint, and perpetuated in the Christian world upon their authority, still no

two travellers or Biblical commentators view particular objects in exactly the same manner.

Hypotheses are proposed by some to remove existing difficulties, which are entirely overturned by others, or proved to contain greater difficulties than the opinion they were intended to supersede: whilst certain data, which, had they been carefully examined, would have been seen to be in error, and the real causes of all this difficulty and confusion, are at once taken for granted. The author in proposing his system of geography, feels confident that it will be recognized as an approximation to the establishment of scriptural geography, upon the only solid basis upon which it can remain immutably fixed, the evidence of the Scriptures themselves: nor is this the only result he expects from it; for by thus freeing the Sacred Writings from the false construction which has been put upon them, by attributing an undue importance to Heathen sources of early history, and by interpreting Scriptural history upon its own internal evidence alone, he thinks to lead to conclusions upon subjects, usually considered as exclusively within the department of profane history, which will be found to be at total variance with the received opinions respecting them; and what is of still greater importance, it will lead to a more intimate knowledge and correct understanding of those earlier portions of the universal history of the world, for the development of which the Hebrew Scriptures are the sole authority.

The author does not pretend to inquire into the state of the world antecedent to the Flood, but thinks that we may form a pretty correct idea of the situation of the Garden of Eden, which he, in an ample Appendix on the subject, places eastward of Ur; as the union of the heads of four rivers, is directly eastward of the spot where he conceives Ur to have been situated; as will be seen in referring to the map placed at the commencement of the first volume. The considerations of the inhabitants before the Flood, and of the Flood itself, he considers irrelevant to his object, and at once proceeds to examine what took place when God remembered Noah, and when the waters of the Flood having by His Almighty power assuaged, "the Ark rested upon the mountains of Ararat." To determine the situation of the country of Ararat, on the mountains of which the Ark is said to have rested, he thinks that our only certain guide, are the several notices respecting that country, which we find in Scripture. From the words of the prophet Jeremiah, "For lo, I will raise and cause to come up against Babylon, an assembly of great nations from the north country," Jer. l. 9,—which nations are particularized in the following chapter as, "the kingdoms of Ararat, Minni, and Ashchenaz," that Ararat was situated northward of Babylon; and from the fact that the two sons of Sennacherib "escaped into the land of Ararat," 2 Kings, xix. 37. After they had put their father to death, it is also clear that it was no great distance from Nineveh; and its

situation is more clearly demonstrated from the circumstance that Ararat is mentioned as one of the "great nations from the north country," which were to destroy Babylon.

He therefore concludes, that the generally received tradition which places Ararat within the country now known by the name of Armenia, is certainly correct. An objection, however, here arises, as to the locality of Ararat, namely, that the direction of Armenia being northward of Babylon, the site of which city has been universally received as identical with that of the Tower of Babel, it must follow, that the journey of mankind from Ararat, (if situated within America,) to the land of Shinar, where that tower was begun to be erected, would have been from the north, and not "from the east," as stated by the inspired historian; which difficulty, the author gets over, by supposing the general opinion of identifying the Babel of Genesis with the Babylon of Nebuchadnezzar. But this appears to be so intimately connected with the incorrect notions that have hitherto prevailed, respecting the geography of the scriptures, that it is worthy of serious consideration, we shall therefore introduce the author as giving his own reasons for this supposition.

"I will premise, that whatever may be the opinion of profane historians, founded on tradition, we have no warrant from the Scriptures themselves for the conclusion, that the City and Tower of Babel, the Babel of Nimrod, and the Babel or Babylon of Nebuchadnezzar, were identical. I do not, of course, intend to infer that their sites were different simply from the silence of the Scriptures as to their identity; but, from other circumstances, I am fully persuaded,—and the silence of the Scriptures unquestionably aids the conviction,—that these three places, although bearing the same name, were totally distinct from each other.

"I proceed to detail my reasons for this conclusion:—The City of Babylon, of which Nebuchadnezzar was king, is generally supposed to have been situate at Hillah, on the Euphrates, about 200 miles, in a direct line, from its junction with the Tigris, and rather more than 300 miles from the point at which the united rivers empty themselves into the Persian Gulf.

"But whatever may have been the actual rate of advance on the Persian Gulf of the alluvial tract thus formed, I think that,—taking into consideration the present state of the country in the neighbourhood of Babylon, as described by Mr. Rich, and keeping in mind the changes which, from the statements of the historians above mentioned, must indubitably have taken place in it,—the legitimate inference is, that in the first ages after the Flood, the state of the country which subsequently became the site of Bablylon, was such as to have rendered it totally inapplicable to the use of man; so that at the period of the building of the Tower of Babel and the commencement of Nimrod's kingdom, *there*, under any circumstances, could not have been that plain in the land of Shinar, where "the whole earth" dwelt, and where they wished to erect a city and a tower whose top might reach unto heaven. Indeed, if the calculation of Nearchus and the statement of Pliny are to be depended upon, we are justified in concluding that, in the period immediately subsequent to the Flood, the Persian Gulf extended so far to the northward as actually

to occupy the present supposed site of Babylon; so that it was physically impossible for the Tower of Babel to have been erected, at or near the spot where its remains have been imagined to exist.

"Divesting our minds, indeed, of the authority of the tradition which connects Babylon with Babel, and considering the degree of probability which may be attached to the idea that the founders of the human race, when they had before them the choice of all the world, would have pitched upon a low, swampy, and unhealthy country, subject to periodical inundations, we shall speedily find that it is not merely improbable, but morally impossible, that they should have done so. Even at the distance of 2500 years from the present time, at which period we know the city of Babylon to have been in existence, the country in its natural state was as totally inapplicable to the use of mankind as it was 2000 or 2500 years previously. But the state of society at the later period, was widely different from that of the first ages of the world; and, as we have instances in ancient Egypt, and also in modern Holland and Venice, how spots in themselves perfectly uninhabitable, have, from the necessities of mankind, or from their peculiar local advantages as places of commerce or of defence, been selected, and by artificial means made habitable, and rendered the seats of mighty cities; so may we understand how, in the time of Nebuchadnezzar, and even earlier, Babylon should have been reclaimed, as it were, from the waste in which it was situate, and made the seat of empire and "the Glory of Kingdoms." It would, however, in the time of Nimrod, have been perfectly unnecessary, if even, indeed, from the paucity of inhabitants, it had not at that early period been actually impossible, (supposing the physical state of the country to have allowed it), to raise those mighty embankments and walls which were the only safeguard and protection of Babylon from the floods of the Euphrates, and by the destruction of which that mighty city has again become 'a desolation among the nations.'

"It is thus evinced that Babylon could not have occupied the site either of the Tower of Babel or of the Babel of Nimrod; but nothing has as yet been advanced to prove that the two latter places were not identical. The tradition on this subject is that the Tower of Babel, whether built by the whole of mankind or by Nimrod's family alone, was commenced at the instance and under the direction of that 'mighty hunter before the Lord;' and that at the time of the Dispersion, Nimrod with his family remained on the spot, and became the founder of the Babylonian or Chaldean Dynasty. For this tradition, the only support appears to be that text which has so often been the subject of discussion: 'And the beginning of his (Nimrod's) kingdom was *Babel*, and Erech, and Accad, and Calneh, in the land of Shinar.' But this authority only proves that Nimrod (or not improbably his descendants, since it seems almost too much to imagine that in those early times one man should have built four cities,) founded a city, the name of which was similar to that of the tower and city from whence the dispersion had taken place; whilst the inference that the two places were identical, deduced from the mere similarity of their names, is entirely rebutted by the following words of Scripture: 'So the Lord scattered them abroad from thence upon the face of all the earth: *and they left off to build the city:*' from which the only legitimate conclusion to be drawn, is that the City and Tower of Babel were left unfinished, and probably were altogether

deserted. The ground of the tradition which has thus improperly connected these three places, may without difficulty be discovered in that vanity with which the history of all nations (that of the Jews, from the nature of its records, forming the solitary exception,) is replete."—Pp. 16—23.

The author, by thus annulling the supposed connexion between the Tower of Babel, and the city of Babylon, removes a stumbling-block from the consideration of this, and many other parts of scriptural geography; and in this particular instance the texts by which the position of Ararat is determined, can be now taken in the full and unqualified force of their literal meaning. We shall no longer see an inconsistency in the assertion, that from Ararat, within the country of Armenia, mankind should have "journeyed from the East," Gen. xi. 2, towards the land of Shinar, in which they erected the tower of Babel; or that the conquerors of the Babel or Babylon of later date, "should have come from the North," Jer. l. 9, out of the same country of Armenia.

The author then enters into a detailed account of the state of society in the immediate ages succeeding the Flood. It is scarcely necessary to do more than to allude to the recognised principle of profane history, that mankind in the first ages lived in a state, which although perhaps one of perfect innocence, must in point of civilization have been but little elevated above that of the brute creation. The idea of a golden age, which was considered to have been succeeded by another of an inferior nature, has been justly considered as a poetical fiction: the notion however involved in it, that in the first ages the human race existed in the lowest state of civilization, has maintained its ground, and the generally received opinion has consequently been, that from this first state, mankind progressively ascended through the several conditions of the hunter, the herdsman, and the agriculturist, until, in this last state, having acquired an absolute property in the ground thus subjected to cultivation, the residence of mankind became fixed and permanent, and societies were by degrees formed, which, from their subsequent increase and union, required the institution of laws for their government and protection; whence at length resulted the establishment of monarchies, and other forms of civil rule. This is the general principle of civilization that has been recognised by the physiologists, historians, jurists, political economists, and others, who have considered the primitive state of man, and the rise and progress of society. The illustrious Cuvier, than whom no one was better qualified to impart to the world new and correct ideas on a subject so deeply interesting to the entire human race, follows the opinion of those who preceded him, and accordingly, in his *Règne Animal*, he traces at length the development of man, in agreement with this principle. The author then quotes the writings of several authors, to prove that they all received this opinion as a true one, but he considers that they err: and says that the fundamental error in all their views arose from not

taking any account of the fact, expressly recorded in Scripture, that the present human race has sprung, not from a common ancestor in a primitive state of society, but from one who was himself a member of a previous social state, which had already existed for several ages; nor of the conclusion which must inevitably be drawn from that fact, namely, that whatever may have been the natural state of the first man, Adam, the progenitor of the antediluvian world, the contemplation of that state cannot aid us in the consideration of the primary condition of the post diluvian world, which takes its origin from Noah, and the seven persons saved with him in the ark. Without presuming to decide what may have been the actual amount of civilization of Noah and his family, we may justly conclude that it was considerably higher than that of the grower of the common necessaries of life, since the scriptures inform us, that one of his first acts after the Flood was to plant a vineyard. And moreover, we know that at a very early period after the Flood, they combined to erect a city and a tower; whilst Nimrod and Asshur, the grandsons of the patriarch, are recorded to have founded mighty cities. And again, we must bear in mind, that the mechanical knowledge which enabled Noah and his sons to build the ark, agreeably to the direction of the Divine architect, could not have been inconsiderable. From these facts, we must be led to conclude that the first state of society after the Flood, being that of Noah and his sons, was one of a comparatively high degree of civilization; and we shall not probably be wrong, in asserting it to be at least, as high as that of the Egyptians, Phœcians, and Assyrians, who are known to us as being their descendants in the nearest degree.

The author enters into an interesting disquisition of the Book of Job, and draws from it the actual state of society at the early period when it was written, but we are unable to pursue him through this inquiry. He likewise enters into a detailed account of the sons of Noah, and their descendants; in which he shows that Shem, not Japheth, must have been the eldest son of Noah; and that Nineveh was founded by Asshur, a descendant of Shem, and not by Nimrod, as is generally supposed. He likewise gives a very elaborate account of the manner in which the world was peopled by the descendants of Noah, in which he proves that the geographical accounts given in the Scriptures are perfectly correct, when clearly considered. We must again introduce our author to the reader, giving to the latter a fair specimen of the general style and tenor of the work before us.

"Having then, as I conceive, determined beyond the possibility of doubt the true position of the Red Sea of Scripture, I may be allowed to remark, that there cannot be a more striking exemplification of the consequences of permitting any *human* authority to supersede the exercise of our reason, than the erroneous position which, down to the present time, has been attributed to that sea. The wonder is, how an error of such

moment, and one which was so easy of rectification, should, during so many ages, have maintained its ground undetected, and, as far as I have the means of judging, even without the slightest suspicion of its existence.

"It is a satisfaction, however, that we at least possess the means of detecting and explaining the origin of this error, which is simply as follows:—Independently of the general ignorance of the Jews subsequently to the loss of their national independence, which led them to imagine that the Egypt of profane history was the country in which the bondage of their ancestors had taken place, we have the most convincing proof from Herodotus, that, in his time, the existence of the Gulf of Akaba was unknown to the Egyptians, and, *à fortiori*, to the Jews then resident in Egypt. According to his account, the sea to the east of the Arabian peninsula, (the Persian Gulf of the present day,) and also the Indian Ocean to the south of Arabia, were called by the name of Ἐρυθρὰ θάλασσα, with which sea the Arabian Gulf is correctly stated by him to have communicated. The following is his description at length of the Arabian Gulf: 'In Arabia, at no great distance from Egypt, there is a long but narrow bay, diverging from the Red Sea [in this case the Indian Ocean], which I shall more minutely describe. Its extreme length, from the straits where it commences [or, more correctly, beginning from the head of the gulf] to where it communicates with the main, will employ a bark with oars a voyage of forty days, but its breadth in the widest parts may be sailed over in half a day. In this bay the tide daily ebbs and flows; and I conceive that Egypt itself was a gulf formerly of similar appearance, and that, issuing from the Northern Ocean [the Mediterranean], it extended itself towards Ethiopia; in the same manner the Arabian one so described, rising in the south, flowed towards Syria; and that the two were only separated from each other by a small neck of land.'

"This statement, while it proves the general correctness of this historian's information, and also his accuracy of observation—since the ebbing and flowing of the Arabian Gulf is a fact that would naturally attract the attention of an intelligent observer acquainted only with the Mediterranean Sea, in which the rise and fall of the tide is scarcely perceptible—establishes likewise the precise amount of the deficiency of his knowledge on the subject, inasmuch as his comparison of the breadth of the Arabian Gulf with that of the narrow valley of the Nile, and his statement that '*in the widest parts* it might be sailed over in half a day,' sufficiently demonstrate his idea to have been that, throughout its entire extent to the Straits of Babelmandel, it was not wider than the Gulf of Suez; and that, in fact, the whole Arabian Gulf was merely a prolongation of that branch of it which was next to Egypt, namely, the Gulf of Suez itself.

"We are more especially led to the conclusion that this historian, in common with the Egyptians from whom he derived his information, was ignorant of the existence of the eastern branch of the Arabian Gulf, by the further statement which he makes when describing one of the regions into which he divides the world; namely, that this region 'commences in Persia, and is continued to the Red Sea' [here the Persian Gulf]. 'Besides Persia, it comprehends Assyria and Arabia, naturally terminating in the Arabian Gulf, into which Darius introduced a channel of [canal from] the Nile;' thus unequivocally establishing his ignorance of the existence of any division between the main land of Arabia and the peninsula of Mount Tor.

"This being, then, the state of knowledge in Egypt respecting the Arabian Gulf 450 years before the Christian era, we can readily understand how the Jews, who subsequently to that period resided in Egypt, and particularly in Alexandria, the extreme western point of that country, should have entertained similar notions on the subject; and as they had (we know not how long anterior to the epoch of the Septuagint translation) also adopted the idea that the Mitzraim of Scripture was represented by the then flourishing kingdom of Egypt, under the sway of the mighty dynasty of the Ptolemies—in the face, however, of the prophecies, which had said that Mitzraim should be 'the basest of the kingdoms,' and that there should 'be no more a prince of the land of Mitzraim,' it is readily conceivable how the Gulf of Suez, the sea immediately to the eastward of Egypt, should have been regarded as the Red Sea in which the host of Pharaoh was overwhelmed. When once this conclusion had been formed, and the Jewish residents in Egypt had thence proceeded to determine (as they conceived satisfactorily) the sites of the several localities connected with that miraculous occurrence, it would have been expecting too great a concession from that bigotry which unfortunately has generally characterized the Rabbins and their disciples, that they should have been induced, simply by an effort of reason, to reconsider and to impugn the authority which they had once recognized; so that the knowledge subsequently acquired of the existence of the Gulf of Akaba would have availed them literally nothing.

"Yet, however the Jews may have persisted in the error into which they had in the first instance unintentionally fallen, it is quite inconceivable how the authority of these 'blind leaders of the blind' should so unhesitatingly have been followed by Christian commentators and travellers, who possessed ample means for arriving at a correct judgment, and who were not (or who at least ought not to have been) bound in the trammels which enslaved those from whom they had originally derived their erroneous information on the subject.

"In thus establishing the fact that the Gulf of Akaba, and not the Gulf of Suez, is the *Yam-Suph* or Red Sea of Scripture, we at the same time obtain the strongest confirmation of the inference already drawn from the physical condition of Lower Egypt in former times, that that country is not the Mitzraim of Scripture."

It is perfectly outrageous in the author to venture on such a course as the promulgation of the almost blasphemous doctrine that the Book of Job is only a piece of poetical fiction, and introduced into the Canon of the Scriptures by a kind of trickery; and that it was only kept there by Christians, for the illustration and elucidation of many of the principal doctrines of the Christian religion. With regard to sacred geography, the author has shown great research, and his work cannot fail to be, on that point, of great use to theologians, and those occupied in biblical literature. We trust that enough has now been said to suggest to the author a little more reserve in the expression of his opinions, for, although we may respect his sincerity, yet we should more respect his judgment, if in the present eventful times he would not risk the chance of disgusting an order of the public, who may be prevented by his indiscretion from enjoying the benefit of his talent.

ART. VI.—*Ladies' Botany: or a Familiar Introduction to the Study of the Natural System of Botany.* By John Lindley, Ph. D. F. R. S, &c. &c., Professor of Botany in the University of London. 1 vol. large 8vo. with plates. London: James Ridgway and Sons. 1834.

THIS is an entirely new work by professor Lindley, and although it is nominally intended for the instruction of ladies in one of the most delightful of all the sciences, yet it is our firm opinion that Mr. Lindley was solely impelled to this publication by the spirit of controversy, which now unfortunately seems to monopolize the whole attention of botanical philosophers, as they are called.

For a great number of years Mr. Lindley, in the great variety of works in which he promulgates his principles, has unceasingly, not merely disparaged, but actually persecuted unto death the ancient Linnean system, which has been adopted as an essential method for teaching the rudiments of this invaluable science. There is scarcely even a small work written by that gentleman, in which will not be found a most bitter, and to say the least of it, a most gratuitous indulgence of indignant commentary. But as these are bold words of ours, it is absolutely necessary that we should prove them, and for that purpose we shall lay before our readers a succinct account of the nature of the existing controversy, merely promising that Mr. Lindley's great opponent is no other than William Jackson Hooker, LL.D. F.R.A. and L.S. Member of the Academies of Lund, Philadelphia, New York, Boston, &c. &c. Of the Imperial Acad. Naturæ Curiosorum, Honorary Member of the Royal Irish Academy, and Regius Professor of Botany in the University of Glasgow.

We commence our description chronologically, in order to place the reader in a condition to comprehend the whole course of the controversy, and we shall therefore set out with giving the first systematic attack made by Mr. Lindley on the classification of Linnæus.

"The method of the last Author (Linnæus) has enjoyed a degree of celebrity which has rarely fallen to the lot of human contrivances, chiefly on account of its clearness and simplicity; and in its day it undoubtedly effected its full proportion of good. Its author, however, probably intended it as a mere substitute for the Natural System, for which he found the world in his day unprepared, to be relinquished as soon as the principles of the latter could be settled, as seems obvious from his writings, in which he calls the Natural System *primum et ultimum in botanicis desideratum.* He could scarcely have expected that his artificial method should exist when the science had made sufficient progress to enable botanists to revert to the principles of natural arrangement, the temporary abandonment of which had been solely caused by the difficulty of defining its groups. This difficulty no longer exists; means of defining natural assemblages, as certain as those employed for limiting artificial divisions, have been discovered by modern botanists; and the time has arrived when the ingenious expedients of Linnæus, which could only

be justified by the state of Botany when he first entered upon his career, must be finally relinquished. We now know something of the phenomena of vegetable life; by modern improvements in optics, our microscopes are capable of revealing to us the structure of the minutest organs, and the nature of their combination; repeated observations have explained the laws under which the external forms of plants are modified; and it is upon these considerations that the Natural System depends. What, then, should now hinder us from using the powers we possess, and bringing the science to that state in which only it can really be useful or interesting to mankind?

"Its uncertainty and difficulty deter us, say those who, acknowledging the manifest advantages of the Natural System, nevertheless continue to make use of the artificial method of Linnæus. I do not know of any other objections than these, which I hope to set aside by the following remarks.

"First, as to its uncertainty. That it is not open to this charge, no one will, I think, assert; on the contrary, it is admitted on all hands, that it fully participates in those imperfections to which human contrivances are subject, particularly such as, like natural history, are from their nature not susceptible of mathematical accuracy. But while no claim is advanced on its behalf to superiority in this respect over artificial methods, it may be safely stated, that it is not more uncertain than the celebrated sexual system of Linnæus, the only one with which it is worth comparing it. By uncertain, I mean that the characters of the classes and orders of the Natural system are not more subject to exceptions than those of the Linnean, as perhaps may be proved from documents in the hands of every English reader. We are so accustomed to believe that the certainty of the sexual system is equal to its simplicity, that this opinion has acquired the nature of a fixed prejudice, and we are perhaps not prepared to assent to the truth of a contrary proposition. Without, however, travelling out of the way, or seeking for proofs of it among books or plants with which the reader is unacquainted, the following table of exceptions to the sexual system, taken from Smith's Compendium of the Flora Britannica, may possibly carry some weight with it:—

Linnean Class of Order.		
"Monandria	5	3
Triandria Monogynia	9	2
Tetrandria	21	5
Pentandria Monogynia	41	5
Pentandria Digynia, excluding Umbellatæ	8	3
Pentandria Trigynia	5	1
Pentandria Hexagynia	1	1
Hexandria Trigynia	5	1
Hexandria Polygynia	1	1
Octandria	12	5
Decandria	21	8
Dodecandria	6	2
Monœcia	24	4
Dicœcia	14	2
Total number of Genera in Smith's Compendium.	173	
Number of Genera at variance with the Characters of the Classes and Orders.		43

"From this it appears, that out of 173 genera belonging to fourteen Linnean sections, no fewer than forty-three genera, or nearly one quarter, contain species at variance with the characters of the classes and orders in which they are placed. Were general works on botany examined in the same manner, it would be found that the proportion of exceptions is at least as great as that indicated by the foregoing table, which comprehends only those species, the variations of which are constant and uniform, and does not include mere accidental deviations, such as the tendency of Tetrandrous flowers to become Pentandrous, of Pentandrous to become Tetrandrous, or of both to become Polygamous.

"Although this is not stated for the purpose of extolling the Natural System at the expense of the Linnean, but rather, as has just been remarked, for the sake of doing away with a vulgar prejudice, yet I cannot forbear expressing my doubt whether any fourteen natural orders can be named in which the proportion of exceptions is so considerable as this, namely, more than one in five.

"Upon the supposed peculiar difficulties of the Natural System, I have elsewhere made some general remarks (*Synopsis*, p. x.), which need not be repeated here. It will be better now to inquire more particularly in what the difficulty consists."—Pp. xii—xiv.

It is essential for us, in order to do justice both to the reader and to the two very great men engaged in this controversy, to present to the world Mr. Lindley's own description of his estimate of the superiority of the natural system. It is as follows:—

"The principle upon which I understand the Natural System of Botany to be founded is, that the affinities of plants may be determined by a consideration of all the points of resemblance between their various parts, properties, and qualities; and that thence an arrangement may be deduced in which those species will be placed next each other which have the greatest degree of relationship; and that consequently the quality or structure of an imperfectly known plant may be determined by those of another which is well known. Hence arises its superiority over arbitrary or artificial systems, such as that of Linnæus, in which there is no combination of ideas, but which are mere collection of isolated facts, not having any distinct relation to each other.

"This is the only intelligible meaning that can be attached to the term Natural System, of which Nature herself, who creates species only, knows nothing. It is absurd to suppose that our genera, orders, classes, and the like, are more than mere contrivances to facilitate the arrangement of our ideas with regard to species. A genus, order, or class, is therefore called natural, not because it exists in Nature, but because it comprehends species naturally resembling each other more than they resemble any thing else.

"The advantages of such a system, in applying Botany to useful purposes, are immense, especially to medical men, with whose profession the science has always been identified. A knowledge of the properties of one plant is a guide to the practitioner, which enables him to substitute some other with confidence, which is naturally allied to it; and physicians, on foreign stations, may direct their inquiries, not empirically, but upon fixed principles, into the qualities of the medicinal plants which nature has provided in every region for the alleviation of the maladies

peculiar to it. To horticulturists it is not less important: the propagation or cultivation of one plant is usually applicable to all its kindred; the habits of one species in an order will often be those of the rest; many a gardener might have escaped the pain of a poisoned limb had he been acquainted with the laws of affinity; and, finally, the phenomena of grafting, that curious operation, which is one of the grand features of distinction between the animal and vegetable kingdoms, and the success of which is wholly controlled by ties of blood, can only be understood by the student of the Natural System.

"In every kind of arrangement which has the natural relationship of objects for its basis, there are two principal inconveniences to overcome. The first is, that as objects resemble each other more or less in a multitude of different respects, it is impossible to indicate all their affinities in a lineal arrangement; and yet no other arrangement than a lineal one can be practically employed. The consequence of this is, that while the orders themselves are really natural, the same title often cannot be applied to the arrangement of them in masses. For example, Cupuliferæ and Betulineæ are obviously connected by the most intimate relationship, and as collections of species, each of them is perfectly natural; yet one of them stands among Apetalous plants, the other among Achlamydeous ones; hence the two latter groups are artificial. In fact, it appears, from what we at present know, that no large combinations of orders are natural which are not founded upon anatomical differences; thus, Cellulares and Vasculares, Exogenæ and Endogenæ, Gymnospermous and Angiospermous Dicotyledons, are natural divisions; but Apetalæ, Polypetalæ, Monopetalæ, Achlamydeæ, and all their subordinate sections, are entirely artificial.

"The second inconvenience is, that the characters which vegetables exhibit are of such uncertain and variable degrees of importance, that it is often difficult to say what value should be attached to any given modification of structure. As this is a practical question, which requires to be well understood, I shall endeavour to explain in some detail the nature and relative value of those peculiarities of which botanists make use in determining vegetable affinities; repeating, as a general rule which is not open to exception, that characters which are purely physiological, —that is to say, which depend upon differences of internal anatomical structure,—are of much more value than varieties of form, position, number, and the like, which are mere modifications of external organs.

"It is a maxim of the Linnean school, that the parts of fructification should be employed in characterising classes, orders, and genera, to the exclusion of all modifications of the leaves or stem. This, although theoretically insisted upon, was practically abandoned by Linnæus himself, and is to be received with great caution. The organs of fructification are only entitled to a superior degree of consideration, when found by experience to be less liable to variation than those of vegetation."—Pp. xvi. —xviii.

We are anxious to note the fact, for it is of importance, that this work was completed by the author in August, 1830. The publication was followed by that of Dr. Hooker, in nine months afterwards, in which he adopts as the principal system by which botany should be taught in these countries, that of Linnæus. But it is

necessary that we should give his own view of the advantages of the Linnæan system.

"In regard to the first object, the experience of nearly an hundred years has proved to every unprejudiced mind that no system has appeared which can be compared to that of the immortal Swede, for the facility with which it enables any one, hitherto unpractised in botany, to arrive at a knowledge of the genus and species of a plant: the Linnæan method is, therefore, here adopted.

"It has been the opinion of the author, and of many of his friends, that in most of the Floras hitherto published, however excellent in other respects, either too much or too little space has been devoted to the generic and specific descriptions and synonyms; in the one case, swelling the book to a size, which entails both expense on the purchaser and difficulty in consulting the several volumes; in the other, reducing the technical characters to the shortest possible compass, so that they can scarcely be made available, except to those who are already partially acquainted with the plant under examination, or with some of its near allies. Between these extremes, the author has attempted to steer a middle course, by giving diagnostic remarks where, and where only, they have appeared to him necessary; confining the synonyms, with few exceptions, to those of the writer who first described the plant, to a good figure, and a reference to a single Flora of Great Britain; and by adopting such an arrangement of the subject-matter as would best occupy every portion of the page, without rendering it obscure to the reader. How far his endeavours have proved successful, must be left to the experience and judgment of those for whose use the work is particularly intended. Should it be available in advancing the cause of Botanical Science in this country, as the already rapid sale of a large impression leads him to hope, the end which was fondly anticipated at the commencement of the undertaking will be fully accomplished. During the progress of the labour, it occurred to the Author that he might give additional interest to the volume by subjoining short notices of the uses and properties of, or some little historical remarks relative to, the species, the origin of the generic names, &c.; thereby recommending the pursuit of which it treats to the attention of the many, who are still apt to look upon Botany as a dry and profitless employment, a system of hard words, destitute of any real utility to mankind.

"Mirbel has well remarked, that 'Ceux qui proscrivent l'usage des méthodes artificielles n'en ont point saisi le véritable esprit; ceux qui ne s'attachent qu' à ces classifications arbitraires, et qui négligent l'étude des rapports naturels, ignorent la beauté et la dignité de la science;' a maxim which it is to be wished were more generally acknowledged. For it is unfortunately too much the practice of the day for the one party, having devoted an exclusive attention to one or other of these methods, to decry that with which he is unacquainted, or the advantages of which he has never had the good fortune to experience. The more easy the commencement of a study is made, the more votaries will be drawn to it; and though they should attain to no further knowledge of a Natural Method than what has been taught by the imperishable writings of a Linnæus and of a Smith, yet let them be assured that in plants, taken individually and in an isolated manner, there are subjects that will give ample scope for the employment of the talents of the greatest philosophers: in the due contemplation of

which they may derive both pleasure and advantage to themselves, and be the means of communicating them to others :—

> ' The well-directed sight
> Brings, in *each* flower, an universe to light.'

Lyonet acquired at least as much honour, and rendered as great service to mankind by his intimate acquaintance with the anatomy and functions of the organs of a single caterpillar, as if he had spent his life in arranging all all the known insects of the world according to a new and Natural System.

" Nor let it be supposed that the author is advocating the cause of an Artificial System to the exclusion of a Natural one; for if any one can be more alive than another to the real advantage derivable from a knowledge of the characters of plants when naturally combined, it is assuredly he, whose duty it is to teach the science to those who are destined for the profession of medicine. The former method will soon enable the student to ascertain the *Foxglove*, the *Cinchonas*, the *Squill*, and innumerable other plants of which he would be ashamed to be ignorant; but the study of the latter will alone put it in his power to extend his inquiries, and with a prospect of success, to analyse other plants of the same Natural Order, among which he may expect to find similar or more powerful principles than what are hitherto known to us. This alone lays open a wide field of usefulness to the Botanist and the Physician; and with the view to so desirable an object, the name of the Natural Order to which each Genus belongs, is mentioned in the following pages; and in the Appendix will be found a complete list of those Orders, so far as British Botany is concerned, together with an enumeration of the Genera belonging to them."—Pp.vii—ix.

The appearance of this work appears to have annoyed Mr. Lindley, and although he asserts that his present work is intended solely for the instruction of ladies, it is fully clear that it is only written in justification of his own views on the subject.

In the preface to this work, the author contends that the principles of the artificial system of Linnæus, which were so important and useful at the time when they were first propounded, are now generally admitted to be altogether unsuited to the present state of science, and states that the author of the latest work published in this country upon that system, is obliged to rest his defence for still following it, upon " the facility with which it enables any one, hitherto unpractised in botany, to arrive at the knowledge of the genus and species of a plant." But, he observes, if a system of botany is only a contrivance to help those who will not master the elements of the science, to determine the name of a plant; and if it is really necessary to have a mental rail-road on which the student in botany may be impelled without any exertion of their own, then he thinks that the analytical tables of the French are much better contrivances than the sexual system; because if well executed they meet every case and lead with certainty to positive results. He says he has always been at issue with the Linnæan school as to their system accomplishing even the little it pretends to; and appeals to his own personal experience of the difficulties of a beginner who is unassisted by a tutor, to prove that it is totally

opposed to such a conclusion. He began with the Linnæan system, which he had been taught to believe little less than an inspired production. He had plenty of works compiled according to that system, to consult; and asserts that he was fairly driven to seek refuge in the natural system from the difficulties and inconsistencies of that of Linnæus. He considers that there is a confusion of ideas in what is urged in favour of the Linnæan system, and that its theoretical simplicity is mistaken for practical facility of application. That the principles of this system are clear, and simple, and easy to be remembered, he cannot deny; but are they, he asks, equally easy in their application? When, for example, a specimen of a monopetalous plant has lost its corolla, or when the stamens or pistils are absent, either accidentally or constitutionally, as in Diæcious plants, what Linnæan botanist can classify the subject of inquiry? Or where a genus comprehends species varying in the number of their stamens, as the Polygonum, Salix, Stellaria, and hundreds of others, who is to say which of the species is to determine the classification of the rest? or when that point is settled, how is a student to know what passed in the mind of the botanical systematist? The latter puts a genus into Octandria, because out of ten species, one has constantly, and two occasionally, eight stamens, and he includes in the same class and order, all the other species of the genus, although they have five, six, or ten stamens. He supposes a student to meet with one of the last, and wishes to ascertain its name by the Linnæan system, he will look for it in Pentandria, or Hexandria, or Decandria, in none of which classes will he find it. After wasting his time, and exhausting his patience in a vain pursuit, he must abandon the search in utter hopelessness, for there is no other character he can make use of as a check upon the first. At length some one will tell him that his plant is a Polygonum; he turns to his book wondering how he could have overlooked it, and he finds Polygonium in Octandria, not because it is Octandrous, but because it is so very like other Polygonums, that it cannot be separated from them, and they belong, in most cases, to Octandria. This he conceives to be the unavoidable answer; and that it really means, that it is not in consequence of its accordance with the system that the student's Polygonum is to be discovered, but in consequence of its natural relation to other Polygonums; so that it is necessary to understand the natural system, to make use of the artificial one. He acknowledges that such inconvenience is guarded against in some books, by special contrivances; but those contrivances form no part of the system. But granting, he says, for argument sake, that these and other objections are overstated, and that the Linnæan system does really facilitate the discovery of the class and order to which a plant belongs; he next considers what advance towards the determination of the genus or species, or, in other words, the name of a plant, a student has really made, when the class and order are ascertained; and in order, he asserts, that every advantage may be

given to the friends of the Linnæan system in this discussion, he examines of what use it will be to him in regard to the few hundred plants which grow wild in England. For this purpose he takes the generic characters in Diandria Monogynia, as stated in Dr. Hooker's British Flora, from which he concludes that to determine to what genus a plant belongs, a great deal of inquiry beyond the discovery that it has two stamens and one style, is indispensably necessary. The student must first be acquainted with the meaning of many technical terms, he must have the plant in different states of growth, he must procure the fruit, must examine the interior of that part, in short must go through a long and careful examination, which is entirely independent of the sexual system. In other and larger classes, such as Pentandria, Hexandria, Tetrandria, &c., the length and difficulty of such an examination is greatly increased. He distinctly asserts that there is no greater difficulty in determining the natural order of plants, than in that of making out the genera in the Linnæan system; in fact, he says it is the very same thing, only with a different result; in the one case it leads to the mere discovery of a name, in the other to the knowledge of a great number of useful and interesting facts, independent of the name. And this he asserts is so strongly felt by all botanists of any experience, that they never think of using the artificial system themselves, they only recommend it to others.

Professor Rennie makes the following observations on the *Natural System*, in describing the fifteenth class. In this class there are eight orders.

"Flowers without petals. There are eight orders—1. Spurges; 2. Nettles; 3. Monimias; 4. Willows; 5. Gales; 6. Oaks; 7. Birches; 8. Pines; 9. Sago Plants.

"We are told, by those who boast of this as the *Natural System*, that it brings together the plants which most resemble one another in anatomical structure, in what are called affinities, and in nutritious or noxious qualities. To show that I do not exaggerate a jot in this statement, I refer the reader to Loudon's Encyclopædia of Plants, p. 1052, where we are told, in the portion of the work contributed by Professor Lindley, that when the natural order of a plant is ascertained, many of its most important qualities, such as 'medicinal properties,' may be 'safely' inferred. Now, if this were so, nobody, I think, would dispute the high value of this *Natural* system. Unfortunately, however, this principle is virtually contradicted by what follows. Thus, under CELLULARES, Order viii., Mr. Lindley gives us '*Cetraria Islandica*, &c., tonic and nutritive,' along with '*Evernia vulpina*, poisonous.' Under VASCULARES, again, Order cxli., (to say nothing as to size, form, and structure,) of 'the fig. the mulberry, and the bread-fruit tree' being *naturally* (common sense would say unnaturally) classed 'among worthless weeds,' such as 'the common stinging-nettle,' 'and shabby half-herbaceous shrubs,' such as 'the hemp and the hop;' what are we to think of 'safely' inferring from the fig, the bread-fruit tree, and the sago plant, the 'medicinal properties' of 'the Upas tree, now known to be the *Antiaris*

toxicaria, the inspissated juice of which,' to use Mr. Lindley's own words, 'is a frightful poison' (p. 1083)? Were I the proprietor of this valuable work, I would not hesitate an instant to break up the stereotype plates, in order to expunge such glaring contradictions and highly dangerous errors. In this division, also, which is the fifteenth class of our ALPHABET, in the second order, among those especially called the *true* nettles (as if there could be in nature any false ones), we find the mulberry tree side by side with the stiff hemp and the light climbing hop. Now admitting that the seed and the flowers of all these agree in structure, as they nearly do, it must appear obvious that the plants are as incongruously and unnaturally grouped as possible, in reference to their general form and habits; while if we look to qualities, what can be more incongruous than to rank the poisonous upas of Java in the same order with the fig? In the seventh order of the eighth class, also, we find the wholesome potato and the mild shepherd's club ranking with henbane and the deadly night shade. In the third order of the eleventh class, we find not only lofty trees ranked with dwarf shrubs, and tiny slender herbs; but we have the coffee ranked with the well known emetic, ipecacuhana, and this again with Peruvian Bark. In the thirteenth class, we have, so far as size and form are concerned, the low growing pinks, violets, and buttercups, ranked not only with the tall sun-flower, but with the stately horse chestnut, the lime tree and the maple; and these again with the climbing vine, and the waving barberry shrub; while we could not, I think, 'safely' infer the 'medicinal properties' of the poppy, from which opium and laudanum are procured, gamboge, which is violently purgative, and buttercup, which is an acrid poison, from the mild cocoa and marshmallow, and the wholesome orange. This would indeed be altogether preposterous. The fourteenth class furnishes precisely similar discrepancies. In point of size and form, we find the spring chickweed, one of our smallest British plants, ranked among apple trees and holm oaks; and these again with the light climbing passion flower and gooseberry bushes. The 'medicinal properties,' however, of the poisonous elaterium, the acrid stonecrop, the emetic laburnum, and the purgative buckthorn, could not be 'safely' inferred from the nutritive pea and bean, or the wholesome pear, apple, and gooseberry,—which are all in this class. I could readily fill a volume with the similar discrepancies of this so preposterously belauded *Natural System*, which, if it have not to answer for the loss of human lives by poisoning upon principle, it is no fault of its promulgators. The fact is, that so far from being more natural than the Linnæan system, these instances, now given with many more, show it to be more palpably unnatural. But the day of philosophy has now, as I fondly hope, at last dawned, and rational and useful studies must ultimately banish mystery and nonsense, though these may, for a season, stalk about in the mask and under the assumed names of philosophy and science."—Pp. 115—118.

From this it will be seen, that there is not that superiority in the *Natural System*, over that of Linnæus, as Mr. Lindley would have us believe. But to proceed further with his views on the best means of studying botany. There is, he thinks, no mistake into which the public is apt to fall, greater than the notion that botany is a science of easy acquirement. It is, by far, too complicated in its

phenomena, like all other branches of natural history, and too diversified in form to be attainable as a science, without long and attentive study; nevertheless he thinks that a certain portion of it may be acquired without any extraordinary application, and he hopes that the plan of his work will sufficiently explain in what manner this may be best done. The mode he recommends to be adopted is, to follow the order he has laid down, and to procure for examination the flowers that are named in it, as they are in most cases within the reach of those who live in the country. The specimens should be carefully compared with the descriptions and plates given of them, and when they are all remembered and understood, he thinks that the student will be a botanist; not a very learned one, but acquainted with many of the fundamental facts of the science, and capable of prosecuting his inquiry to any further point, and of studying other and more scientific works with facility and advantage. The plan he lays down to be pursued by those who desire to push their inquiries beyond the information contained in the present work, is to read some introduction to botany (his own of course), in which the modern views of structure, and of vital action are well explained; they should then make themselves familiar with the technical terms, which he has carefully avoided in the work before us, but which cannot be dispensed with in works of a more exact and scientific character, and at the same time perfect themselves in a knowledge of the natural orders, by gathering the wild plants which are within their reach, comparing them with one another, and with the characters assigned to them in systematic works. Being thus provided with a considerable amount of fundamental knowledge, they may then apply themselves to the study of the natural system in its great features, when, and not till then, they will be able to appreciate the various modifications of organization that connect one tribe of plants to another, and to understand the infinite wisdom and beautiful simplicity of design which is visible in the vegetable world, the just application of which, through the countless gradations of form, structure, and modes of existence, he considers should be the constant aim of the botanist to demonstrate.

The work is written in the form of letters, addressed to a lady on the botanical education of her children; in the first of which he relates the following fable from a French author, in answer to a supposed question, whether the difficulties which are said to accompany the study of this branch of science, cannot by some little contrivance, be either entirely removed, or at least very much diminished.

A lady one day observing some ants travelling across a table, dropped a piece of sugar in the midst of them; but to her astonishment, although these little insects are noted sugar eaters, they all retreated with terror from the spot, nor did they afterwards find sufficient courage to return to examine the object of their dread;

on the contrary, they carefully avoided that which would have proved a treasure, had they known its value. Struck by this circumstance, the lady placed the same piece of sugar on that part of the table near which the ants were in the habit of crossing, and when she saw one of them approaching it, she gently placed her finger in his way, but in such a manner as not to alarm him, whilst it obstructed his passage; the ant paused, looked round him, and then took a new direction, not exactly towards the sugar, but near it; the lady again opposed his passage gently, and at last, by making him take a sort of zigzag direction, tacking as it were, at every few steps, the ant was unconsciously brought to the sugar without being frightened. Once there, he attentively examined the glittering rock, touched it with his antennæ, broke off a morsel, and hastened away with it to the ant-hill; thence he presently returned at the head of a small host of his comrades, by whom the rest of the sugar was carried off. From this anecdote the author infers, that if young persons are once alarmed at the aspect of a new pursuit, a knowledge of which they are endeavouring to obtain, it is almost impossible to restore their confidence; but that there are few who, if led to it insensibly, will not persevere till they have made themselves masters of the subject. The most discouraging part of botany to a beginner, he conceives, to consist either in the numerous new and strange names, the meaning of which he has to learn, or in the minuteness of the parts by which plants are distinguished from each other, or in the great multitude of species of which the vegetable kingdom consists; and he confesses that there is something alarming in the mass of preliminary knowledge, which it would appear, has to be acquired, before any perceptible progress can be made. But when the subject is examined more closely, we shall, he observes, find that only a small number of technical terms employed is really necessary in the beginning; that the minute parts are but little consulted in practice, however much they may be in theory, and that the arrangements of botanists are so perfect, that no more difficulty is experienced from the number of species, than in any other branch of natural history. There are certain terms, the exact meaning of which, the student must become acquainted, and a knowledge of which cannot be dispensed with, if the science is to be studied to any good purpose; a certain habit of observation must also be acquired, without which the differences between one plant and another cannot be appreciated or remembered; but these may be gained imperceptibly, or without any extraordinary degree of exertion or industry. The student has only to commence at the beginning, and never to take one step, till that which preceded it is secured; he may then advance to whatever point he pleases; and this, the author observes, is the whole secret in teaching botany.

We regret to have been under the necessity of speaking in a tone of censure of Mr. Lindley with regard to the controversy between

that gentleman, and the advocates of the Linnæan system; but we felt conscious that we should not have been justified in letting the present opportunity pass, without making it known how far we thought him correct on that subject. The professor's present work is decidedly one of value, and may be read with great advantage, care being taken by the reader not to be led away by those parts where the professor decidedly rides a hobby.

ART. VII. *Affairs of the East India Company; Finance and Accounts; Trade*; *Part II. Commercial.* Ordered by the House of Commons to be printed. 1832.

THE public attention having been lately very strongly directed to the East India Company, and it being a matter of considerable doubt whether or not the policy which the government has acted upon in reference to that body was a wise one, we think that we shall gratify the public by presenting to them a brief account of the system on which their extensive commercial business was conducted.

All the goods intended by the East India Company for exportation are primarily purchased by the Committee of the Court of Directors in such a manner as most to benefit the Company; and generally by advertisement or circular letters. Some stores not considerable enough to be bought by competition are purchased of tradesmen by private agreement. Small quantities of arms, and most things of that kind, are bought chiefly by private bargain; but all articles admitting of being purchased by muster are so purchased. Whenever purchases are entered into, either privately, by advertisement, or circular letter, a special report is made to the Court by the committee. The commercial affairs of the Company, both at home and abroad, are generally given to the care of the committee of buying and warehouses. Another committee is appointed for shipping; to their superintendance is entrusted the management and provision of naval stores, and the repairing of their ships. It sometimes, though seldom, happens that the committee of correspondence purchase articles out of the usual way.

In 1832 the number of men engaged in the warehouses of the East India Company was 2547. The expense of the warehouse department was 315,000*l*., under the following heads:—for landing goods, dock dues, cartage, and materials, &c., 69,000*l*.; daily wages, 160,000*l*.; rent of warehouses and grounds, 24,000*l*.; taxes and repairs, 20,000*l*.; salaries to clerks, 42,000*l*. These sums are exclusive of the expense of buying and warehouses in the India House, or of any rental for the Company's warehouses, many of which are freehold property, or whose leases can be renewed on the payment of fines. These departments are valuable at 950,000*l*.; and the expense of buying and warehouses in 1827 came to the sum of 13,069*l*., thus exceeding its amount in 1817 by 3,205*l*. On

account of the long service of their clerks, their salaries have been increased. There has been no reduction in the establishments, for, although the exports to India have ceased, the exports to China have been considerably more extensive. It is said the business is carried on at an unnecessary expense; that more men are engaged than have sufficient employment; and that their wages are too great. At St. Katharine's Dock, the labourers receive daily 2*s*. 8*d*. for eight hours' work, whereas those appertaining to the Company have 2*s*. 9*d*. for six hours, and 3*d*. for every extra hour; and 6*d*. extra if at work on indigo; and 4*d*. extra if employed at Blackwall. In addition to all this, at the Dock-houses the men are better superintended, and more work is performed from competition and desire of promotion, which is believed not to be the case at the India House, where most is obtained by influence. Only 150 men are constantly engaged at St. Katharine's Docks. When the business is very great, men are sometimes employed for a time, to the number of 800 or 900. In 1831 the expenses incurred by the Dock Company were in all 71,132*l*., inclusive of 1100*l*. for a superannuation fund, 19 directors 2,950*l*., 78 salaried officers 13,682*l*., labourers 49,532*l*., stores and materials 6000*l*., fire insurance 500*l*., taxes, &c. 6,500*l*., repairs 2,500*l*., incidental charges 5,000*l*., to which may be added 34,000*l*. interest on borrowed money. The total outlay on the docks has been about 2,150,000*l*. In 1831 the quantity of goods landed, &c. was 214,000 tons. In 1832, on the 1st of January was landed in the Dock warehouses the weight of 52,000 tons of goods; while in the India House the stores did not exceed 55,000 or 56,000 tons.

We must, however, admit that tea, the principal branch of the Company's trade, causes more employment than any other article in other Companies. The assortment and sampling of the different teas require considerable skill, and also greatly augment the portion of labour.

The system and mode of management among the East India Company is essentially different from that followed at the Public Docks; the latter act merely as warehouse-keepers, for receiving and delivering goods; the Company pursue the same line of conduct in this, but in addition, sell the goods and receive the proceeds, and thus make themselves agents of the importers. The Company maintain their own officers in all the Public Docks, where they take charge of goods housed there, which the importers desire to be entrusted to the Company. At the expiration of the Charter Act in 1813, it depended upon the reasonable terms held out to the public whether or not they continued the sale of private Indian merchandize. Schedules of rates were promulgated, and varied occasionally according to circumstances, and regulated with the agreement of importers and buyers. These arrangements are said to be of service to the public, insomuch that many importers of Indian merchandize, who house their goods in public docks, fre-

quently desire to place them under the Company's protection and management.

The levying of rates, as carried on by the Company, is different from the usual mode at the other docks. The Company levy their rates by an *ad valorem* per centage from 1¼ to 7¼ per cent. according to the tariff of the several articles. In the Dock Company, rates are calculated, 1st, with reference to extent of labour; 2d, cost of materials; 3d, profit prefixed thereto to produce a remuneration upon the capital invested. The Company's *ad valorem* rate of charge is heavy on a large quantity of goods, but on some few it is low. Since the fall of the prices of articles, the Dock Company have placed some goods lodged with them under the management of the East India Company, because their *ad valorem* mode of charge did not cover the expense of working the goods; but when the rates on valuable goods operate otherwise, the Company have nearly lost the whole of the sale of several commodities, such as saltpetre, cotton, sugar, drugs, &c. The charge on indigo is heavy, in comparison with what it is when housed and sold by other Companies. Prejudices have gained a prevalence favourable to the East India Company's management, and indeed it is sufficiently deserving of admiration; but in many cases, the charge exceeds the advantage. From the *ad valorem* rates now charged by the East India Company, the Dock Company would deduct one-third, and take such reduced rates as a remuneration for warehousing, managing, and charging for rent and delivery, and taking the privilege of exemption from the auction-duty. The East India Company annually pay 30,000*l.* to the Dock Company for the use of their docks and warehouses; and, in consequence, have delivered orders to compel vessels carrying goods on their account to proceed to the East India Docks to discharge, thereby filling the warehouses there, and having the advantage of the landing and wharfage charges. This makes it expensive and incommodious to the private merchant, who would prefer landing his goods at St. Katharine's Docks.

"The Company's broadcloths were, until lately, dyed in London; they are now dyed in the country, and bought in a finished state. The camlets are bought in a dyed and finished state at Norwich. Some are purchased in Yorkshire, but only occasionally, as that kind of manufacture is not so well understood there as at Norwich. The long-ells are still dyed in London, because no dyers in the west of England have offered to dye them. The principal colours are scarlet, purple, black, and blue; and the dyeing has, within the last two years, been executed by contract, circular letters being sent to the trade. Previously to that time the dyers were employed as regular tradesmen to the Company, the business being divided into 36 shares, and one dyer having three shares another two, and another one, as they had obtained appointments from the Committee of Buying, in whose patronage the shares were when vacancies occurred. The prices were fixed annually alike for them all, but some of the dyers who had several shares were subject to a deduction.

The prices were fixed according to the price of drugs and the state of the markets. It was a very good business, and generally, but not as a matter of course, descended from father to son. If the dyeing had been performed by contract with one or two houses, it would undoubtedly have been done cheaper, though the dyers always said that it could not, and complained that they were not paid sufficiently."—Pp. 484—485.

The Company, since 1824 and 1825, have ceased to export merchandise to India. The goods they exported were principally copper and woollens, sold at good profit; and there continued to be a profit generally to the time the exports ceased. In 1826 the Court signified to the Government of Bengal, that though they had long satisfactorily been exporting British staples to India, yet, considering the many difficulties incurred, they had thought it expedient to come to a determination not to export woollens, copper, iron, lead, or any other kinds of merchandise to any of the Indian Presidencies. The exportation of wine was occasioned by complaint of scarcity of good wines at moderate prices; the export continued four or five years, but the trade finally became disadvantageous.

Exports to China are diminished in some kinds of merchandize and increased in others. In 1813-14 the quantity of long-ells and camlets was larger than it is now; that of broadcloth much smaller. The export of long-ells has fallen off within the last eighteen or twenty years. The number of the articles exported are much the same, but the cost price is reduced. Superfine cloth, which used to be at 20*s*., is now sold at half the usual price. Lead is now 13*l*., instead of 40*l*. a ton. Exports are now two-thirds of the usual price. The exports to China are regulated by the demands from the Company's servants there. They annually send a requisition for the next season, which is generally exceeded by the Court. For many years the Company exported long-ells to China, though persuaded they would be attended with loss. It was estimated that the Company's long-ells consumed the fleeces of a million sheep, and employed thousands both in Devonshire and Cornwall. A considerable profit arises from the trade of long-ells, in consequence of the depression of the price of wool. A change from loss to profit occurred in 1829-30 and 1830-31. Broadcloths have produced profits, and enormous quantities are purchased in Yorkshire.

The company cannot be said to sustain loss by any articles in the China market, but they are overreached by private traders smuggling camlets into Canton. As there is no prohibition, China is mostly supplied with camlets surreptitiously introduced. On long-ells, the duty being more reasonable, there is little inducement to smuggle them. The principal articles of merchandise now exported to China, are broadcloth and long-ells; but British calicoes, cotton twist, and numerous other articles have been exported. They now export tin, though that article was discontinued in 1816-17, some was sent three years afterwards, but none since 1821-22; it was first exported in 1788. The trade was generally

found to be unprofitable. In 1820-21, cotton-twist was exported, but not again till 1827-28, when 90,000lbs. were sent out. In 1828-29, they sent out 300,000lbs.; in 1829-30, the same; in 1830-31, 480,000lbs., and they were intending to export the same quantity, when information arrived of disturbances having taken place in the vicinity of Canton. In consequence of this, the Company expressed a resolution not to send any more. It is also reported, that on account of some detection of imposition in the manufacturing of satins for the Indian market, by using twist of high numbers instead of silk, it thence had become unsaleable at Canton, and had been shipped off to Singapore and elsewhere. The consignment of 90,000lbs. being of lower numbers, brought considerable profits.

The East India Company's Commercial Establishments and Proceedings in India and China.

At Madras, the establishments for commerce are abolished; at Bombay, there is one factory for the provision of cotton to be sent to China. The agents for silk, cotton, and saltpetre, are the only agents now remaining in India. They are in some instances, found defective and unequal to the task they have in hand: because sometimes they are removed from a place where some one article is not transacted to a residency, where that article forms the principal part of their business. They were till lately remunerated by a monthly allowance, and a commission upon the goods, now their salaries are fixed. Previously to 1801, when Lord Wellesley issued directions that they should receive no surplus goods without an express permission, residents would, with a view of increasing their commission, enter into engagements in excess of the quantity of goods ordered from their respective factories. A commercial resident has annually received £7,000. Mr. Bayley, at Benares, received £9,000, but he was also an opium agent. The rate of commission allowed by the Company to their servants was $2\frac{1}{2}$ per cent., and limited when it exceeded a certain sum. The commercial servants carry all their proceedings to the Board of Trade, who keep a continual superintendance over them. All commercial transactions are referred to and regulated by the Board, they keep a correspondence with the residents, and when required, a member is deputed to give his personal supervision at any particular factory. Facts of importance are to be reported to the Government and thence to the Court. The Court is regularly acquainted with the proceedings of the Board.

The largest amount of territorial revenue advanced in one year, has been about two millions.

All civil, except commercial servants, are under restriction as to agency and partnership, and are prohibited from trading on their own account. The first distinction between political and commercial servants, arose when the Parliament directed that persons em-

ployed in the management of revenues, or administration of justice, should not be engaged in trade. Medical officers when attached professionally to a civil station, are permitted to trade. Military officers are mostly restricted from trading. Government should be prohibited from trade, and principally those in the service of the Company. Captains of vessels carry on trade on their own account. The officers of the Company may possess a share in the government bank. With the exception of raw silks, silk goods, saltpetre for their factories, and of indigo bought from Calcutta, they have almost entirely discontinued to be importers from India into England. Orders are issued to cease the provision of sugar. Factories of cotton piece-goods are abolished, the commercial establishments of the traders are done away, and but one factory remains at Bombay for the provision of cotton to be assigned to China. There has been an increase of silk bandannas, but it is immaterial. Some loss was formerly incurred by importing raw silks and nankeens from China; in consequence they were discontinued to be imported. The only article now imported from China is tea. Private traders, however, have largely supplied our markets with both nankeens and raw silks; and it proved of some advantage. Quantities of cotton-wool are exported from Bengal and Bombay to China.

Union of Government and Trade.

The political management of India, independent of commercial affairs, is enough for the due superintendence of government, owing to this, that assiduous attention can never be given to trade, which trade absolutely demands, and which is indispensable to make trade profitable. Though in the interior of the country, there are regulations to prevent impositions and unfair advantages, it is next to an impossibility that such rules can be enforced. Commercial agents, as forming part of the governing aristocracy of the country, possess an undue influence. Persons employed by them partake of a similar influence; it is on this account that the private trader can never be on an equal footing. If the government officer be zealous in his labour, he will exert authority beyond its limitations; if he be indolent, the government will lose. For want of a lawful control over the commercial agents' proceedings, silk was raised to most unreasonable prices. The Company's trade in silk is injurious to the private merchant. The private trader has nothing to hold as a security; one year government may expend 700,000*l.* to purchase indigo; and another will, perhaps, purchase nothing. This will operate to derange private transactions; government has long discontinued to claim a monopoly in its commercial capacity in Bengal, and it should long since have ceased to trade in articles not included in its territorial monopolies. The manufacture of opium and salt is carried on with a view to revenue, not trade. The purchase of cotton for China, is included in the same rule, as the

purchase of silk. Dearness, or inferiority of quality, must be inferred to the consequence of transactions in which the government engage. All native articles, such as cotton, would be brought to China without the intervention of any European, if wanted there; and the native establishments are all economically conducted.

Inasmuch as the Company's arrangements produce uncertainty, cost is likely to increase. Were the government to cease trading in India, and the free settlements of Europeans there, it would certainly be to the infinite advantage of commerce. Commerce is always prejudiced by the interference of government. The Indian trade may practically be said to be open now, except in what is connected with political circumstances, residence of Europeans, &c. No obstacle is now present to prevent a free trade with India; the only impediment is, that the Company do not trade on the ordinary conditions of profit and loss. No grievance is tolerated by private traders under the protection and administration of the Company in trade with India; the privileged authorities belonging to the Company cannot molest them; but till some late regulations had been formed, it was a matter of very great difficulty to enter into competition with the Company, where mercantile establishments were raised. Remonstrances were made, and were listened to, in consequence many abuses, arising from their right of presumption, were removed; but the government, in such cases, was the sole deriver of advantage. The line of conduct pursued by the Company, in this instance, was wise and correct; but, notwithstanding, a deference is paid to the Company, arising out of their union in India, of the character of sovereign. The connection between the Company and the government of India has kept up the price, and produced a quantity of indigo from that stimulus alone. A greater quantity of indigo has been imported at high prices, by private merchants, than by the Company itself. The fall of prices, when the Company, in 1830 refused to purchase, became destructive to numerous individuals. Lately little has been transacted by the Company, their whole design being to trade for remittance, not in the capacity of a commercial body. It was an act of injustice to the private adventurer, when (though the rupee might be brought to England a little above the customary rate of exchange,) the Company obtained an unfair advantage, by trading as they did with their revenues at their back. It appears, from the Company's accounts, that of late years indigo and silk have fallen considerably. The two characters of sovereign and merchant, if separated, would increase business of the agency houses in India, and of the commercial body generally; but it is still more to be desired, for the purpose of preventing evils, which are certain to ensue, when the commercial body and the Company come into competition.—The Company might still be allowed to retain the power of occasionally making a remittance of goods. It is always injurious to commerce, when the Company act upon the markets in India by

orders delivered from this country. Prices have been considerably raised by the system of purchasing hitherto followed by the Company, and in consequence such a system should be abolished.

Commercial agents of the Company receive better salaries than the agents of private traders; because the dignity of the Company is upheld to the eyes of the natives.

In the Company's ships chartered for six voyages, the freight paid by them is dearer than that paid by private merchants. This system was forced on the Company by law.

The merchants of Calcutta have, in no degree, experienced an influential favour from government. The stamp act is a clear proof.

Silk.

In India, the silk-worms are principally fed upon the mulberry, or the castor oil plant, or palma christi. In the north-western provinces of Bengal, silk of inferior quality is produced from plants of the laurel kind.

The description of mulberry cultivated in India, is that called the Indian variety.

"The description of mulberry cultivated in India, is that called the Indian variety. The trees are generally planted in rows about six or eight inches apart, and they are about three feet high; but sometimes they are suffered to run up in coppice, about six feet or more in height, without being thinned. The leaves of the latter are reckoned more nutritious, and the plant is also thought to suffer less from the weather; but the former is the general custom, perhaps because it is the oldest, and that the other has not been introduced long enough for it to be decided that it is actually superior. The cultivation of the mulberry might be improved. The natives will not rear the plant in such a manner as to make the supply any thing more than a very scanty leaf. A man who can supply exactly the quantum necessary for the filature in his vicinity, would not take the trouble to exceed it. It would be extremely well worth while to cultivate the arborescent kinds of mulberry. Throughout the Bengal provinces, the dwarf kind only is cultivated, consisting in shoots, in cuttings that are allowed to remain only a very few seasons. The extreme rapidity of the produce is that at which the natives aim, that which will give them an immediate return; but that return is not so great as it would be, if they adopted the mode pursued in the south of Europe, of having mulberry trees in cultivation. The periods of gathering the crops vary in different districts; in some the gathering is in March and April, July and November. The crop in the rains (July) is the most abundant. The leaves are first picked about four months after the trees are planted; afterwards there is a crop every eight or ten weeks. In the first year, there are about four crops, and in the second, six. The trees are planted generally about the end of November, and the first crop of leaves is ready in the next January or February; they are hoed and dug between the rows, not much watered, and weeded occasionally: there is no irrigation. After the leaves are gathered, the plant is cut down to about a foot from the ground; once in the year, at

the end of November, it is cut down to the ground, and at that time, but not at others, the ground is ploughed between the rows. A dry soil is reckoned preferable for the plant: there is no fruit. There is not much care taken in the cultivation. The ryots are the producers: there is no European superintendance at all. In general the same parties grow the leaves and keep the worms. When the leaves are given to the worms they are chopped small. A begah (about one-third of an English acre) of plants will feed 1,000 worms a day.

"There are two species of worms, the country worm and the large annual. The country worm hatches four times a year, and the large annual only once. The one species is not more hardy than the other, nor more prolific. There is more silk from a cocoon of the annual worm, but the country or dessy worm is the best by far. The difference in the silk produced seems wholly to depend on the season in which the cocoon is spun. The best season is what is called the November bund, in which the cocoons are finished spinning about the beginning of December, and the worst is the rainy. The quantity during the rains is larger, but the quality is very much inferior. The two species of worms are quite alike as to the treatment they require. Treatment makes no difference as to their health or produce. The interval between the time of being hatched, and that of commencing the cocoons, depends very much on the season in which they are hatched: sometimes it is between two and three months; and in the hot season, from twenty-five to not much more than thirty days. No artificial heat is used for hatching the eggs, but in the cold season there is a fire occasionally for preserving the worms: they are kept in a place where the light is excluded where the air is, because there are no glazed windows. It is a mere hut, with a hole in the wall, before which a screen is placed when it is desired to exclude the air; and that of course excludes the light at the same time. This is done during the whole time the worm is feeding. Improvement might be made by erecting the buildings more on the European plan. A dry soil is reckoned preferable for the worms as well as the plant. The silk is reeled principally at the Company's filatures, but partially by the peasantry at their own houses. The process is very similar, but inferior to that used by the Company. The cocoons are placed in hot water, and wound off upon reels which are fixed. The coppers are set in masonry, having under each a furnace for heating the water: the plan is entirely the Italian. The cocoons are reckoned to give in silk about a twentieth part of their weight."—P. 489.

Lands for producing silk are higher rented than other lands. The Company's silk agent is called a pykar, to whom the commercial resident advances sums to be circulated among the feeders of silk-worms. The Board of Trade fix the price according to the information they receive from the silk residents. The silk is inspected at Calcutta, and the agent is deprived of his commission if it be of inferior quality. Numerous pykars are employed by all the factories. Cocoons are brought to the storehouses, and reeled into silk by natives paid by the factories. The winding of the silk is principally superintended by the natives alone. The pykar may superintend the filature, whenever he likes, to see that justice is done to himself. An agreement is made by the pykars for each

bund after it has been wound into silk; thus, each commercial resident determines the price of his own factories, not regarding what is given by other factories for silk of the same bunds; but in 1827, it was determined, by the Board of Trade, that a fixed price should be settled at all factories. In 1831 the case was altered, which respected the payment given to the pykars, for each bund respectively after it was wound into silk; the Board of Trade then came to a resolution of settling with the pykars before the bund was commenced. The price given by the pykars to the rearers of silk is unknown to the court. This is the general system, but occasionally cocoons are purchased directly from the rearers. In Bengal twelve residences are established, and each under the supervision of an European. Residents are sometimes unacquainted with the filature of silk, having been taken from a residence where silk is not the article of manufacture, and placed over another residence where nothing else is worked. In business which requires money to be given in advance prior to the delivery of the article, loss is often incurred from bad debts.

Raw silk has in general been a good remittance. It has been 2*s*. 8*d*. per sicca rupee. Silk is a losing concern as far as it does not realize in London the silver it cost in Calcutta.

From 1815 to 1830, a rise has taken place in India in the price of silk, occasioned by the Company endeavouring to increase their quantity. The price in London has not been depressed in the same proportion as other Indian commodities. No more silk was produced than was required, as has been evidently the case with other articles of commerce.

The Italian machinery for winding silk has been introduced into India at a vast expense. Strict attention has been given to the Bengal silk by the Company. The Company's silk is evidently superior to silks imported by private individuals. The character of silk would not deteriorate if left entirely in the hands of private growers, because the price always depends upon the quality.

The silk trade is free. Filatures have been established by individuals, but have not answered. The silk trade depends upon the growth of the mulberry; we are informed it only grows in certain parts of Bengal. In some parts, where the situation is advantageous, the Company by means of their silk agents, cultivate extensive tracts of the country. Gentlemen have gone over to India with an intention of entering the silk trade, but have had their views frustrated. Individuals are unable to give the enormous price to the rearers of cocoons, which the Company afford. This was attributed to the private motives of the Company, to prevent the competition of private merchants, or, that as the agents are remunerated by a commission on the price, it tended to their advantage that the price should be high. Orders were also issued from home directing larger quantities to be transmitted. The Company gave about 14rs. 6a. a seer, which could be purchased at 12rs. and made for

10rs. 8a. In 1826, an improvement in the reeling of silk was attempted to be introduced into India, by Mr. Wilkinson; it was tried at Santipoor and Rungpoor with tolerable success. This improvement, invented by Mr. Heathcoat, was considered by the Court of not sufficient importance to be introduced into the Company's factories. The improvement has since been generally adopted throughout France and Italy.

The Company's filatures, with the machinery, are valued at 20 lacs of rupees, or more, when actively employed. No one would estimate the filatures at what they are worth, if they did, judging from what is seen of private trade, they would degenerate. Were the Company to discontinue the silk trade, many would, unquestionably, be found to enter into it; there is a doubt whether the Company would be enabled to dispose of their filatures with interest to themselves. By private competition and economy the silk trade would be increased, and its price would be reduced. In general the Company's establishments are economically regulated. The chief native servant in a factory has 20*l*. a month. The resident's house is extensive, but not to an extravagance. Many comforts are required in India which are not needed in England; in house-rent and number of servants the expense is greater. Private merchants could not afford their agents so costly a salary. The dignity of the Company must be upheld. Merchants in Calcutta, and generally the Europeans in India, live more splendidly than people of the same class of society in England. If the Company were to cease trade entirely, doubtless, individuals would take their factories. Silk has increased so much in consumption at home, that capital in India would be invested in its production, as has been the case with indigo; and, indeed, it is very desirable to have another article in which capital could be so profitably invested.

The silk of France, Italy, and Turkey, is stronger than the Bengal silk. As to quality, the silk of Bengal is as much required as any other kind, if not more so. The Italian silk is finer than the Bengal, but larger quantities of coarse silk is generally ordered by the Company. By the system adopted in India, more attention is given to quantity than to quality, as this is more to the interest of the people employed. The inferiority of silk is more justly attributed to the indolence than the inability of the workmen. They should be more closely superintended. The people are as able workmen as the Europeans. An evident improvement might be effected. More care is taken both in France and Italy. The Bengal silk is uneven, or what is called endy, having many breaks in it occasioned by mismanagement. Although the climate of India is adverse, considerable improvements might be made by attention and care. Improvements might be made in the system of feeding the worms and cultivating the plants upon which they feed; but it is a matter of doubt whether an improved breed of worms could be introduced with success from the south of Europe. At Tiverton, the

quantity of a 15 cocoon silk reeled per day from one basin, is 10 ounces ; in India, 8½ ounces from the best, and and a smaller quantity from inferior cocoons, although two skeins are wound at once in India, and at Tiverton only one ; consequently, if two skeins were wound at once at Tiverton, the product would be 16 ounces.

The mode of getting silk piece-goods is, the commercial resident issues advances to the head weavers under contract for bandannas. Private traders surpass the Company in the quantities of bandannas.

Cotton.

Indian cotton is inferior, but from good seed, good cotton might be produced. The cause of inferiority in Indian cotton, is not so much attributable to the unskilfulness of the natives, as to that unaccountable mark in the character of the Indians : their inactivity or unwillingness to exert themselves beyond what is necessary to procure the minimum of profit. It is owing to this cause, that the cotton plantis reared as an annual, whereas in America and the Leeward islands, it is only triennial. Every variety of cotton is produced in India, even the sea-island cotton is cultivated in many parts of India, but from bad management in cultivation, the quality is inferior. Proximity to the sea, appears beneficial to the cultivation of fine cotton, but miserable husbandry is enough to deteriorate the excellence of cotton. From the bad method of cleansing cotton, parts of the oily substance that still remain, which not only discolours the cotton, but makes it liable to mould. It is conveyed to Calcutta, in boats miserably constructed, exposed to all inclemencies of weather, for four or five months. When it arrives at Calcutta, it is put into cotton screws, which are not worked in a proper manner, and in consequence, the cotton is subject to an unequal pressure. It is sent to England in a state of dampness and mouldiness. It is impossible, under such treatment, good cotton should be produced. Cotton is largely exported from Bengal and Bombay ; and it formerly was from Madras, until the factories were abolished.

Indigo.

The annual arrival of Indigo in Calcutta from the interior, is about the end of Ooctober ; an advertisement is then inserted in the newspapers, signifying that the Board of Trade are ready to receive sealed proposals from such as are desirous of selling indigo to the Company. The most advantageous offers are accepted.

By the advancement of sums to the indigo planters, who had a very imperfect system of cultivating this plant, the Company first created the real manufacture of indigo in India. The destruction of St. Domingo, which, prior to the French Revolution, supplied nearly all the world with indigo, was the cause of the sudden prosperity of the indigo trade. Several plants produce indigo, and that from which it is now principally obtained, is not likely to continue

the exclusive source of that branch of commerce. The plant, as it is now cultivated, is not susceptible of farther improvement. The native indigo was bad, till it was ameliorated by Europeans. The success attending the production of this plant, is owing to the facility with which it is grown, and the abundant crops produced in favourable seasons.

Lac-dye.

Lac-dye is produced from a variety of plants; from species of figs and of jujubes, the polash or dak, a sort of cytisus and mulberry, besides many others. This is a valuable article, and has been improved in its production: but it is often rendered inferior in quality from the crude manner of extracting it used in India. It has a red dye, used in dyeing clothes.

Sugar.

Sugar is badly manufactured in India, though the land fit for the cultivation of the sugar-cane is very abundant. Sugar is likely to be an important article of commerce: there are even large demands for it in India. Factories have been established at Benares, and agents employed to traverse the country and buy sugar; but directions have been given to discontinue the import of this article.

Saltpetre.

In 1814, 146,000 cwt. of saltpetre were imported by the Company. Since 1814, the trade has been free. The depression of price of this article, was so low, that it has been purchased for manure; but this is only since it has been imported by private individuals. In 1814, the price was 89*s.* 6*d.*, per cwt.; in 1823, it was 21*s.*; but since it has risen to 42*s.*, and is now 37*s.* It was, previous to 1814, an article of profit, but since then until 1830 it was unprofitable.

Tobacco.

Tobacco is not an indigenous plant of India; it was not originally cultivated there. It is consumed in Hindostan, high and low, Mahommedans and Hindoos; mixed up with molasses, spices and fruits. An acre of rich land will produce eight maunds, that is, 80 seers, about 160lbs. Indian tobacco is bad, but is susceptible of improvement. Tobacco grown in the Northern Circars, and converted into snuff at Masulipatam, is much prized in England; also what is grown at Bundlecund, and Havannah tobacco at Boglipoor, is held in high estimation. Some from the Burmese country is equal to the best from the West Indies.

Coffee.

The cultivation of coffee might be ameliorated. Since 1823, it has been more largely demanded than prior to that period. In

lower Bengal, as much as 4,000 acres of ground have been laid out for the cultivation of coffee by Europeans. Coffee is a shrubbery plant, and requires ten years to come properly into market. The best coffee is produced in Bengal and the Burmese territory.

Iron.

Mr. Heath, formerly of the Madras Civil Service, has established an iron foundry at Porto Novo. Iron of the best description is cast there; knives and scissors made at Porto Novo are equal to any from Sheffield. Iron ore abounds in the neighbourhood of Burdwan.

Coal.

Cutch coal is not good for steam-engines. At Bombay, English coal has been found cheaper and more available than that of India. In India the best coal comes from Burdwan; it is ten annas, or ten-sixteenths of two shillings, per bushel. There is an extensive coal-field at Burdwan, and another is worked at Mirzipore, about forty miles from Calcutta.

Timber.

Indian timber might be of more importance in commerce than it is at present. The forests abound in timber of every description. The principal kinds are teak, saul, sissoo, toon, janool, and mango. Bad management has occasioned a falling-off in the production of saul, sissoo, and bamboo. Pine and oak are abundant. European skill should devise means to remove the obvious difficulties and risks which are experienced in floating down the timber entire from Cawnpore and Goruckpore. The forests in Martaban and on the Tenasserim coast might be made more beneficial to the use of man by European agency. Indian timber might thus become an article of foreign trade.

India Trade.

Before the opening of the present charter, the commerce of Calcutta was in the hands of a very small number of houses. After the opening of the trade, houses of a more extensive connection were established, and business was more enlarged.

In Calcutta there are now thirty or forty commercial establishments. Of late years the commerce of Calcutta has greatly increased.

The exports of British cottons have been considerably augmented. The trade has principally increased in cotton manufactures. No native is averse to using British manufactures: the only obstacle is the want of means to purchase them. Liquors are consumed in large quantities by the more wealthy. Cotton piece goods are converted into cloths for the use of the natives; cotton twist is worked up for the same purpose.

Twist mills have been lately invented in India, but they are unequal to the cotton mills employed in England. The productions of India, which appear most likely to become articles of commerce, are sugar, cotton, coffee, silk, indigo, tobacco, and perhaps tea.

American Trade.

The discontinuation of the supply of camlets for the China market by the Company, arises from the supply being illicitly introduced by the Americans. The Americans export quantities of our manufactures to China. They buy camlets, but not long-ells, because the duties in China on the latter are too moderate to afford inducements to smuggling. Broadcloths are exported by the Americans. The interference of the Americans with the commerce of China is injurious to the Company.

The Americans employ native brokers to purchase their cargoes, because their charge is less. Cargoes are purchased by bills drawn, uuder letters of credit, on Messrs. Barings' house, or other houses in the American trade.

French Trade.

The French trade with French commercial houses in Calcutta. They import champagne, and various sorts of wine. Some French ships are employed in the indigo trade. It would be to our advantage if some arrangements could be made with the French government respecting our navigation law. The French purchases in the Indian market are frequently attended with disadvantage to themselves. Not more than ten or fifteen vessels sail annually from France to British India.

We must at length draw our remarks on this valuable work to a conclusion. To enter more fully into the details of useful knowledge comprised in it would exceed our limits; we must, therefore, content ourselves with simply recommending it to our readers as a work replete with interest and utility to all such as are desirous of becoming acquainted with the affairs of that numerous and commercial body, the East India Company.

ART. VIII.—*Introduction to the Study of Nature, illustrative of the Attributes of the Almighty, as displayed in the Creation.* By J. STEVENSON BUSHNAN, F.L.S., &c. Longman, Orme, Rees. London. 1834.

THE object of this work is to show, from the invariable adaptation of the organs of animals, to the circumstances in which they are destined to live, and the functions they have to perform, from the unbroken harmony, observable in their relations with each other, and with external nature, throughout the entire chain of living beings; and, from the order which prevails in the material world, the succession of seasons, &c., the operation of infinite wisdom and design, in all the arrangements of creation. This attractive

and useful study, has at all times occupied a large portion of man's attention, although it was reserved for the present age to bestow upon it such a degree of development, through the labours of Cuvier, and other great naturalists, as not only to exhibit the wonders of creation in such a light, as to delight by contemplation, elevate the intellect, and mould our feelings to adoration and gratitude, but to vindicate the truths of Revealed Religion, by a better interpretation of those facts, which vanity, and conceit of knowledge, had foolishly presumed to wield against the very foundations of its doctrines. Cuvier had been called the High Priest of Nature; but his prodigious researches entitle him to reverence also, as a sincere and powerful advocate of revealed truths.

Respecting the wrong direction of the education hitherto given to our youth, it is pleasing to find the truth coming upon us from so many sources. It is, as it were but yesterday, we discovered that nma has other faculties, than his intellectual ones, to be cultivated, both for his own happiness and the general weal; on this head, Mr. Bushnan speaks thus :—

"When the importance of preoccupying the mind with right views is considered, the almost total neglect of this department of instruction, in our common systems of education, cannot be too strongly condemned. It is indeed surprising that so obvious a method of opening the youthful mind, and imbuing it with useful knowledge, should not be eagerly seized by the judicious instructor.

"In making this remark, I have no intention of reflecting upon the laborious exertions by which the languages and the literature of the classic ages are inculcated; but it is impossible to refrain from observing, that if these accomplishments are only to be obtained by repressing the Love of Nature, inherent in the breast of ingenuous youth, and by deadening the generous curiosity of that early age to become acquainted with the mysterious world in which Providence has placed us, the price which is paid is by far too dear.

"It is doubtless owing to the injudicious training of the years of boyhood that so many are to be found, who, notwithstanding the innate tendencies of the human mind, and the wise adaptations, and kindly invitations and allurements of nature, are found as they advance to manhood, to become more blind to the beauty and grandeur impressed on the objects around them, and less alive to the treasures of knowledge and mental enjoyment, as well as to the proofs of wise and beneficent design with which creation teems.—There must be some radical defect in the discipline by which the youthful mind is cultivated, when the mental eye, as it expands, only sees the hand of its Creator more dimly, and the very faculties which were intended to enable him to view His works, and to receive an exalted enjoyment in the contemplation of His perfections, become more contracted and obtuse, as the means of exercising them become more abundant.

"We should pity the man whom we should discover wandering blind and insensible in a splendid museum, amidst the exquisite productions of art; but much more, most assuredly, is he to be commiserated, who, with his eyes open, walks unmoved amidst the wonders of the universe,

and casts a 'brute unconscious gaze' upon scenes which reflect the glories of the Eternal, and from which the highest created intelligences receive edification and delight."—Pp. 19—20.

In the mere gratification of our taste, for the study of nature, viewed,—

"In the mere gratification of our taste for the study of nature, viewed in its various phases and arrangements, there is not only enjoyment, but the means of mental cultivation. Taste has been sometimes considered as nothing but the application to external nature of that faculty, which, in morals, enables us to distinguish between right and wrong—the beautiful, in objects of sense, being supposed to be perceived by the same operation of the mind, which distinguishes what is proper and becoming in the intercourse of society; but without adopting this opinion, we may confidently assert, that, from the exercise of the former, a salutary effect upon the character results, somewhat analogous to that which arises from the exercise of the latter."—P. 11.

But, whatever be the subject to which he directs his attention—

"Whatever be the subject to which he directs his attention—whether the earth or the skies—whether the great laws of nature, as exhibited in the vast universe, or their minute combinations and relations, in reference to objects with which he is daily familiar—whether the mighty masses of inanimate substances, or the properties of organized matter and beings—in every instance the superficial view to which he was accustomed quickly disappears, and he is introduced, as it were, into a new world, in which he traces more distinctly, at every turn, the footsteps of an intelligent and omniscient Creator; and while his mind is enlightened by new knowledge, his reasoning faculties are strengthened, his views are enlarged, and his moral perceptions become more acute and accurate."—P. 15.

The second chapter treats of the differences between inorganic and organic matter; the nature of life. The analogies in the structure of man, and other animals, and the relation of the functions to each other. One of the grand objects of comparative anatomy, is the tracing out of the relation of functions, and there can be no doubt that many of the discoveries of modern physiology have been derived from this source, but we should be carefully on our guard in studying the ascending organic scale, from the polype to man, not to fall into the error of Lamarck, whose theory proceeded upon the monstrous assumption that the different species of the more perfect animals are derived from the less perfect. If the study of nature were to lead the mind to the adoption of this principle, that time could exert an influence in producing such changes in the form and condition of animals, the votaries of chance might well boast of a light for its blindness, a clue to guide them in the dark labyrinth in which they wander, rather than bear the effulgence, the rays which the Author of Nature sheds over all his works. The doctrines of Lamarck are not merely insufficient, they are utterly false, for the form, size, and structure of all animals, was just as perfect, and as distinct from each other, as they were on

the very morning of creation. We refer the reader, on this point, to the admirable and overwhelming refutation contained in Cuvier's works, now in course of publication, by the publisher of this journal. We grant it possible, that we have misunderstood our author in page 44, and the design and execution of his whole work, tend strongly to support this opinion; but if he feels with us, he will be as anxious as we are ourselves, to enter a caveat against doctrines which have already had too many converts.

In Sir C. Bell's work on the human hand, it is stated that the stature of man is calculated with reference to the bulk of the globe itself. Mr. Bushnan reproduces this idea in these words:—

"And, first, the size of the objects around him is calculated to harmonize with the medium size of man. Had his body been much less than the average size, or considerably larger, both extremes would have been equally unfitting for the due exercise of the physical faculties.

"Suppose, on the other hand, man was of pigmy stature—a few inches only in height, how limited would be his efforts; how narrowed and circumscribed would even the greatest intellects be with such deficient physical powers. A small brook would be to him an impassable barrier; rivers and seas would interrupt for ever the tide of commerce and the spread of knowledge; wild beasts would be dreaded as the greatest terrors; and, in every insignificant animal, he would find a formidable foe.

"Then, as to the other circumstances of external nature; what is there even of her humblest arrangements that we could omit or modify? The air which surrounds us is, in its chemical properties, precisely that which is adapted to support respiration; and, in its mechanical properties, precisely that which is calculated, by its pressure, to preserve the body in health and vigour. If, instead of the two principles called oxygen and nitrogen in certain definite proportions, it had consisted of any other ingredients, or even of these two in any other proportions, death would in a short time have ensued—had the oxygen been in excess, from the stimulus which it imparts being so violent as to produce inflammation; and, had the nitrogen been superabundant, from the inadequate supply of that principle, on which the purification of the blood essentially depends. Again, had the density of the air been much greater or less that it is, the energies of man would have been, on the one hand, oppressed by it, as by an unnatural load, and on the other, insufficiently sustained by it, as by a defective support. We all feel more or less of these effects on every sudden change in the barometrical pressure, and, still more remarkably, on either descending below the water in a diving-bell, when the air becomes preternaturally dense, or ascending into the atmosphere in an air-balloon, when it becomes preternaturally rare; and had either of these states been permanent, its effects on the human economy must have been most prejudicial. Among other things, the senses of both smell and hearing, both of which depend for their perfection on a medium density of the air, would have been either insupportably intense or defective. Further, with regard to light—the first of created things, and the creation of which is described in the most sublime passages of written language—this is precisely such as is adapted, when reflected from the objects which

surround us, to afford the proper stimulus to the organ of vision; and, even the colours of the most common objects are those which are most refreshing to the sense of sight.

"The blue sky which surrounds us, could we, with advantage, change in colour? This colour, which is owing to the thin watery vapours floating in the atmosphere, and reflecting peculiar rays of light—the blue and the violet, might appear at first sight as a matter of chance—the mere cast of a die. But suppose any other had been reflected—a bright yellow or dazzling white — a glaring red — a fearful copper colour; or, suppose no reflection had taken place at all, but a black dome had surrounded the whole earth, and light had only become manifest when the eye received it directly from the sun—how uncomfortable such arrangements would have been for the vision of man! Of all the hues we could imagine, is there any to surpass that mild and soft etherial tint, harmonizing with all around us, and on which the eye, fatigued with more brilliant and dazzling objects, turns for relief and repose?

"And, further, in the relative bulk of animals in respect to man, we find another wise provision in the adaptation of nature. Had animals been much larger, they would also have been more unmanageable, and had they been smaller, they would have proved but of little use; and here some curious speculations might present themselves, were we to consider the prodigious size of many of the antediluvian animals, the remains of which have been preserved in the earth's strata. These seem to have been formed, and to have inhabited the earth before man had yet multiplied to people it; because, in the first place, among all these remains of animals no human bones have been found; and, secondly, did there exist in the present day so many species of huge animals of carnivorous propensities, that power and command which the human race holds over the inferior creation might be disputed."—Pp. 51—63.

In the fourth chapter the author proceeds to show how admirably the several organs engaged in the performance of the functions of mastication, digestion, circulation of the blood, and respiration are respectively adapted to the end in view.

"Some of the zoophytes," says he, "present a purse-like appearance, and may be turned inside out without making any material difference in their powers of effecting the changes which their aliments undergo, to fit them for the purposes of circulation."

"They may be represented, if we please, as all stomach, or as having no stomach at all; for we may call the whole body stomach, if we will, but we must at the same time allow that they have no stomach, properly so called. Such an animal has been defined by Cuvier, a sentient self-moving sac, capable of digesting food. As we ascend, however, in the scale of animals, a specific organ becomes appropriated to every different function; and hence the necessity, in all but the very lowest classes, of a gullet for swallowing the food; of a stomach for retaining it, till it has undergone the first step of those changes to which it is to be subjected; of an intestinal canal for perfecting those changes, and for transmitting it so changed to the circulating vessels; and of a liver, and some other similar organs, for assisting, more or less essentially, in these operations. The simplest modification of a distinct digestive apparatus is to be met

with, among the zoophytes, in the wheel-animal, in which there is a distinct membranous sac for the reception of the aliment; and a similar structure occurs in some kinds of sponge, in the sea-blubber, and in the sea-anemone. In the sea-blubber, for example, there is, on the lower surface of the body, a simple aperture or mouth, leading by four passages into the same number of sacs or stomachs, which are not so much formed by a distinct membrane, as scooped out of the gelatinous substance of the body; they are, nevertheless, capable of digesting the small prickly fishes on which these animals subsist, as well as other substances apparently easily capable of resisting their action. But a more perfect modification of digestive apparatus is most common, not only in the higher classes of animals, but even in worms and insects. Thus, among the Crustacea, the sea-urchin has the gullet, stomach, and intestinal canal quite distinct from each other; and this is still more obvious in some of the Testacea, as in one kind of snail, in which there is found, besides a very large liver, a proper membrane enclosing all these parts, as in the higher classes of animals, and called peritoneum. The same is the case, among the molluscous animals, in the cuttle, in which the gullet expands into a kind of craw or crop, similar to what is met with in some birds, and the stomach also is firm and fleshy like a gizzard. A similar crop and gizzard also are met with in some other animals of this tribe, as in the earth-worm, in which the latter is often found to contain little pieces of earthy matter, which the animal seems to swallow—as some kinds of birds are known to do—for the purpose of assisting the attrition of the food. In so far they perform the office of teeth; and it is a beautiful illustration of the various means, by which nature sometimes attains the same end, that to some similar animals, as the great marine worm, she has given actual teeth, situated in both the stomach and gullet, for this purpose. The stomach of the cuttle is furnished also with a spiral-shaped appendage, into which the bile is discharged from the liver. What is called the ink of the cuttle, generally but erroneously supposed to be the bile of the animal, and the chief ingredient probably in the common paint called Indian or China ink, is the product of a little pouch in the course of the intestinal canal; and of use in staining the water, and thus concealing the animal, when about to be preyed upon without any means of defence. With how obvious a design here has nature compensated to the cuttle for the want of those prickles with which she has defended the surface of the sea-urchin.

"In the bee, the gullet and stomach are each very short and straight, but the former is dilated into a kind of crop, in which, apparently, the honey is prepared, and from which it is afterwards ejected into the honey-comb; while in the latter is formed the wax, which exuding through the rings on the fore-part of the body, becomes collected in a depression on the thighs; the venom apparatus is analogous, both in its situation and structure, to that of the scorpion. In other insects, the several parts of the digestive apparatus are little more than a repetition of these; but I must not omit to remark that, all these parts are, in general, smaller, and less complicated in the carnivorous than in the herbivorous tribes, apparently from the matters on which the former subsist being already animalyzed, and requiring, therefore, less preparation before they are received into the blood. It is worthy of attention also, that, while the insect is in a state of

larva or caterpillar, the stomach is much larger than it is afterwards, most probably because a greater supply of nourishment is now required for its full development. In this state, accordingly, they are voracious, and their digestion is proportionally quick; it having been computed that they sometimes devour and digest no less than three times their own weight of aliment in four and twenty hours! On the other hand, during the subsequent metamorphoses which the animal undergoes, no food is taken; but nature has beautifully provided against any necesity for this, by causing insects to become very fat, as observed by Malpighi, on the approach of these changes, so that this fat being absorbed into the blood while these are going on, serves all the purposes of a supply of alimentary matters from without.

"The craw or crop is more remarkable in the gullet of the gallinaceous birds, than in that of any other animal; and in the pigeon there is besides, on each side of this passage, a spherical bag; capable of being distended with air, which gives the animal the appearance called pouting. It is in this class of animals also that that form of stomach called a gizzard assumes its most characteristic appearance, consisting, as it does, of four distinct muscles—a large hemispherical pair at the sides, and a small pair at the extremity of the cavity. It is of an almost cartilaginous consistence, serving the animal for a kind of teeth; and such is its hardness and power of resistance of injury, that it has been found capable of breaking lancets and bending needles, which have been introduced into it, without itself undergoing the least injury. It appears also, that birds with this kind of stomach, are accustomed to increase its powers of attrition—as I have already noticed of the earth-worm—by swallowing small pebbles, without which the digestive process would be imperfect; and it has been presumed that this kind of stomach has been given to herbivorous birds, in preference to the plurality of stomachs which herbivorous quadrupeds possess, because, while their digestive process is not less difficult, such a plurality would have been incompatible with the lightness requisite for flying, Carnivorous birds have, on the contrary, membranous stomachs, like carnivorous animals in general. The fluids formed in the gullet and stomach of birds are, in general, more copious than in those of other animals; and some birds, as the Java swallow, actually construct their nests of the viscid substance which, at certain seasons of the year, they pass from these passages! These nests, in appearance something like saucers made of isinglass, are a well known luxury at tables of eastern epicures, and are not unfrequently imported into Britain, and used in flavouring soups and dressed dishes.

"From these the transition is easy to those in which there is a plurality of stomachs, as the porcupine, which has three, and most of the ruminating quadrupeds, which have two, three, or four distinguished—when there are four—by the names of paunch (*ventriculus*), bonnet (*reticulum*), manyplies (*omasum*), and caille (*obomasum*). When the food is swallowed for the first time, it passes directly from the gullet into the paunch, where it undergoes some necessary changes, and it is then transmitted to the bonnet, to be mixed with the fluids of that cavity. This process is going on during the time the animal is grazing, when, from the incessant occupation of nipping off the grass, it has not leisure to chew it sufficiently. Upon its afterwards reposing itself, however, the half chewed aliment is brought again, in successive little balls, from the bonnet into

the mouth, where it is now subjected to a perfect mastication; and, when again swallowed, it passes directly to the many-plies, thence, after some time, to the caille, and ultimately to the intestines. How beautifully is this structure adapted to the habits of the animal, and how strictly analogous is this second chewing to the action of the gizzards of the gallinaceous birds!

"It was the intention of nature that fishes should constantly inhabit the waters in which their gills play freely and constantly, and the circulation of their blood is therefore uninterrupted; but reptiles were destined to live at one time in the air, and at another in the water, and it became necessary, therefore, to give them a circulating apparatus, which could perform its office equally well, whether the animal was respiring, as it does while in the air, or had for a time ceased to respire, as is the case when it is beneath the water. Some of the higher orders of reptiles, as the tortoise and the alligator, make an approach to the double heart of birds and quadrupeds, that is to say, while it is in structure still more or less a single heart, it is in function—at least so long as the respiratory organs are in action—almost a double one; the right side of it receiving principally the impure blood from the large veins of the body, and sending it through the lungs, while the left side receives chiefly the purified blood from the lungs, and transmits it by the main artery to the rest of the system. This, however, is the case only when respiration continues unobstructed; since, upon the animal's descending below the water, both sides of the heart co-operate more or less in receiving the blood from the body in general, and in transmitting it again to the body, the right side, which, under other circumstances, transmits it principally to the lungs, now sending it, in common with the left, to the body in general; and the left side, which, under other circumstances, receives it chiefly from the lungs, now receiving it, in common with the right, from the large veins of the body. The greater perfection of the organization of these tribes seems to have required that the blood should be in general, more decidedly of two kinds—arterial and venous—than was necessary in those of a lower grade; while, at the same time, their amphibious habits did not allow of the distinctly double heart which is proper to birds and mammiferous animals, the respiration of which is not liable to be in the same way impeded.

"But some terrestrial insects are capable of respiring even under water; and the means by which they do this is extremely curious. In general they carry down with them a considerable portion of air in the interstices of the hairs with which their bodies are covered, and which, continually exuding an oily fluid, prevents the water from coming in contact with it: they breathe, therefore, under these circumstances, in a kind of natural diving-bell. In some insects, however, as the water-scorpion, the air tubes, instead of this contrivance are provided with long processes extending from the posterior part of the body, the extremities of which being always above the water, furnish them with a constant supply of fresh air.

"A fish was destined to be always in the water, and a bird or quadruped always in the air; and hence the structure of their respiratory, as well as circulating system, is such as to incapacitate them each for the other element; but a reptile was intended to be sometimes in the one, and

sometimes in the other, and both systems are accordingly so constructed as to allow of this. Further, some serpents, the hydrus bicolor, for example, are enabled to continue under water for an indefinite time by a provision similar to that which I have already described, as found in the water-scorpion among insects, being capable of bringing the upper part of their wind-pipe almost to a line with the point of their lower jaw, so that they can breathe, although scarcely any portion of them is out of the water.

" It is peculiar to the former, however, to have their lining and investing membranes prolonged from various parts of their surface in the form of tubes, which, expanding into bags, envelope almost all the entrails, so as to keep them constantly surrounded with air; and similar prolongations, extending also from their back part into the cavity of the bones, serve to inflate these in the same manner. The chief object of this peculiarity appears to be that of giving lightness to the animal, and thus of enabling it to support itself in the air; and the same object is fulfilled in insects, as we have already seen, in a manner very analogous. But do we ever meet with this general diffusion of air through the bodies of animals not designed for flying—in worms, fishes, reptiles or mammiferous animals—as should at least sometimes have happened, had a blind chance, and not an omniscient Providence presided over their structure?"—Pp.78—109.

The fifth chapter treats of smell, sight, hearing, taste, touch, and locomotion :—

" In birds, the nasal cavities are in general very large, their external aperture being in the upper mandible, and their internal in the pharynx. The olfactory nerve is very large in carnivorous birds, and its great size, together with the great length of the nasal cavities, serves to explain the immense distance at which some of them—the vulture for example—are known to scent carrion : it is said to be capable of doing this over the whole breadth of the Mediterranean!

" The ' intellectual noses,' as they are called by Lord Byron, of dogs are proverbial; and the distance from which many other quadrupeds, particularly such as are carnivorous, are sometimes attracted by the smell is wonderful—white bears for example, being found to come swimming to the Greenland ships, when a whale is cutting up, from all quarters, and far out of sight. Some quadrupeds, as the hog, the peccari and the tapir, have a remarkable power of moving the extremity of their snout; but this is probably less for the purpose of smell, than for that of burrowing, &c., their snout being to them, as its proboscis is to the elephant, a kind of hand.

"In some birds with piercing sight, as the falcon and crane, the flattened optic nerve has one of its surfaces folded into numerous plaits, bearing the same relation to the other as the leaves bear to the back of a book; and the extent of surface thus gained may be easily imagined.

" In conclusion, I may observe that, so nicely and admirably are all the organs of locomotion in quadrupeds adapted to each other, that an anatomist, from the inspection of any one bone out of the two or three hundred which compose the skeleton, is enabled to infer the general form and relations of all the rest, as well as of the ligaments which con-

nect, and the muscles which move them.—Nor is this all: for, so intimately does the structure of this shell, as it were, of the body correspond with that of the internal parts, that, from this one bone he may almost give a description of every organ of the animal—of its propensities, and of its habits! Can this correspondence be the work of a blind chance? or does it imply a unity of design, an extent of benevolence, and a vastness of power, indicative of a ruling Providence—the great Architect alike of the star of the firmament, and of the mite which plays in the sunbeam—whose hand is traced equally in the immensities of magnitude and of minuteness—the Almighty Father of the universe, and of every thing which astounds and delights us in its construction?" —Pp. 148—151.

Mr. Bushnan next considers the revolutions of the seasons :—

"Innumerable, indeed, and irresistible are the arguments, which from a survey of the seasons alone, must take hold of every thinking mind, in attestation of the existence of an All-wise and Omnipresent Creator. When we regard the internal functions of plants, we find a complete cycle, which corresponds exactly to the duration of the year. Spring is required for the ascent of the sap in the fruit trees; summer and autumn ripen their produce; and the cold of winter is necessary for hardening the shoots, which have been produced by the heat of the sun. 'If the wheat-ear,' says an eloquent writer, 'were to remain exposed to the sun of a six months' summer, the grain would be reduced to chaff. If it were green during a spring of similar length, it would never come to maturity. Either our vegetables are suited to our year, or our year to them. In either case we see a law of mutual adaptation, which demonstrates the necessity of previous design.' The invariable regularity with which the earth performs its annual revolution is demonstrative of Divine love; for, were not this the case, seed-time and harvest would fall into confusion, and all our calculations of time, and our dependence for direction from celestial phenomena would be vain and abortive. So would it be with the alternation of day and night, were the duration of these not immutably fixed also; the vegetable kingdom even would be convulsed; the marigold, which as Shakspeare says,

> 'Goes to bed with the sun,
> And with him rises weeping.'

the hawkweed, the day-lily, and the dandelion and others, from which Linnæus attempted to construct a natural clock, from their opening and closing at certain hours, would have all their wonderful mechanism destroyed, did the sun rise and set at uncertain intervals. So would it be with man. A period of sleep once in the twenty-four hours is necessary to restore the bodily energies, which have been exhausted by a day's activity; and unless his corporeal frame were quite altered from what we now know it to be, the recurrence of night only three times in the week, instead of once in the twenty-four hours, would not only diminish the duration of life instead of extending it, but be a drag on his activity, instead of propelling it to exertion."—Pp. 164—166.

We hurry over this and the succeeding chapters, merely observing that the beauty and warmth of description in which the author paints the "rolling year as full of God." will be read with pleasure

by every admirer of natural feeling and graceful eloquence. In the chapter on geology, he strongly and successfully reprobates the notion that discoveries in this department of science have had the slightest tendency to unsettle a belief in Divine Revelation. Cuvier, whom he quotes, shows, on the contrary, how revelation and geology mutually confirm each other. Ornithology, icthyology, and entomology form the subjects of the succeeding chapters.

On the powers of locomotion, longevity, and productiveness of fishes, we make room for the following extracts :—

"Large fishes are known to overtake, and play around, with great ease, a ship in full sail; and it has been calculated that a salmon will glide over eighty-six thousand four hundred feet in an hour, and twenty-four feet in a second; that it will advance more than a degree of the meridian of the earth in a day, and make the tour of the world in a few weeks.

"'Let the waters bring forth *abundantly*,' said the Lord; and when we consider the astonishing fecundity of a single fish, we shall find how truly the Divine command has been obeyed. According to Lewenhoeck, the cod annually spawns upwards of nine millions of eggs contained in a single roe; the flounder produces above a million; and the mackarel above five hundred thousand; a herring of a moderate size will yield at least ten thousand; a carp of fourteen inches in length contained, according to Petit, two hundred and sixty-two thousand, two hundred and twenty-four; a perch deposited three hundred and eighty thousand, six hundred and forty; and a female sturgeon, seven millions and fifty-three thousand, two hundred.

"Some fishes also live to a great age. The carp which were bred in the ditches of Port-Chartrain, are said by Buffon to have exceeded in age one hundred and fifty years; and those in the Royal Gardens of Charlottenburg, in Prussia, are reported by Bloch, to have their heads overgrown with moss. Lodelius alleges, that in some ponds in Lusatia there are carp about two hundred years old. At Manheim is a skeleton of a pike, nineteen feet in length, and which is said to have weighed, when alive, three hundred and fifty pounds. It was caught at Kayserlantera in 1497; and a Greek inscription on a brass ring, inserted in the gills, announces that it had been put into the pond by the Emperor Frederick II., that is to say, two hundred and sixty seven years before it was taken. Some species, however, are known to have a much shorter existence; thus, the eel usually lives about fifteen years; the bream and the tench, from ten to twelve; while the stickleback seldom survives two."—Pp. 257—262.

Mr. Bushnan has executed his task in a very able manner; his work is a good avant-courier of the great work of Cuvier, which is now in the course of translation into our language. The reader will experience pleasure in its perusal as he advances; and some of the last chapters are truly eloquent.

ART. IX.—*Education of the Deaf and Dumb. Troisieme Circulaire de l'institut Royal des Sourds-muets de Paris, a toutes les Institution de Sourds-muets de l'Europe, de l'Amérique et de l'Asia.* Paris; Septembre, 1832. *De l'Education des Sourds-muets de naissance, par M. Degerando, Membre de l'Institut de France, Administrateur de l'institut Royal des Sourds-muets, etc.* 2 Vols. 8vo. Paris. 1827.

THIS is a subject which, notwithstanding its intrinsic importance, has never been in any manner attended to in this country; and it is with a view of exhibiting the great and valuable account, to which this subject may be turned, that we now propose to estimate the progress which has been made in it in Europe, aud in America, up to the present time.

This subject has been treated by numbers of writers throughout Germany. France has retrieved her inactivity, and has now attained a place beyond competition at the head of the science, and the art. We are greatly indebted to France for the work of Degerando, the most valuable and complete which touches on this subject, and which comprises all the general fundamental principles of the system. Most all of the nations of Europe have contributed to the common stock of improvement.

Though in England we have not arrived at the perfection of this noble art, our sympathy and liberality have been evinced to this unfortunate portion of the human race. Institutions and asylums have been established; but until the commencement of the sixteenth century, no one had ever entertained the idea that education could be imparted to the deaf and dumb. It would have seemed irrational to pretend to administer instruction to people afflicted by constitutional deafness. So far from it occurring to our minds that there existed means of educating the Sourds-muets, it has been frequently the case, as well amongst us, as in barbarous nations, to consider those affected with deafness, not only as totally unable to receive instruction, but even to look upon them with a kind of aversion, and as beings labouring under the chastisement of Heaven. The propensity of our nature leads us to believe, that things cannot exist otherwise than as we have known them. Consequently we know it was by the auricular powers we acquired our mother tongue, and still retain the means of holding communication with our fellow-men; hence we have concluded, that without these faculties, man cannot partake of these blessings, and on this account he is to be regarded as deficient in intellect, and scarcely above the brute creation.

Let us consider society in its infancy; the eye and the ear equally present themselves as instruments, through which a communication may be established between man and man. In the first instance the eye offers the only means of intelligible intercourse. It is

through the medium of signs addressed to this organ, that the value of other signs, more convenient in use, but infinitely more arbitrary, having sound as their basis, and addressing the intelligence through the eye, is gradually determined. This is actually the case with every infant who acquires his native tongue, entirely through the ear. It is what must, agreeable to the conviction of all men, occur in the case of a voyager who is unexpectedly shipwrecked, and cast upon a coast inhabited by nations speaking an unknown tongue.

It is a palpable folly to imagine that ideas cannot associate themselves, without regard to spoken language, or, in short, without regard to articulate and audible sounds. Hence those who are deprived of the sense of hearing, must not be looked upon as less capable of intellectual culture than others, who have the free exercise of all their five senses. In order to discern to what extent the improvement of their minds may be carried, every instructor of the deaf and dumb, must first satisfy himself of the intellectual ability of those to whom his attention is directed. Notwithstanding, it is astonishing to observe, how many of the men most eminent in society, the most intelligent and humane, place these unfortunate creatures in a situation so much below ordinary men, both as to what regards science and morality. It would be tedious and unprofitable to cite the various humiliating delineations, which are given by the Abbé de l'Epée, Abbé Licard, M. T. Guyot of Groningen, of M. Eschke of Berlin, M. Cosar of Leipsic, and numerous others.

It is hard to imagine, that miserable as must necessarily be the condition of a deaf and dumb person, without education, that he is so utterly degraded in the scale of being, as the opinions of many learned characters would warrant us in believing. We must bear in recollection that the prejudices of men, however otherwise celebrated, imbibed from the propensity of their nature, were not extinct. After reviewing in our minds this melancholy picture of human misery, it is gratifying to our feelings to observe, that all have conceded to this natural tendency; that all have not blindly been led into the same inhumanity of belief.

"It is gratifying to observe that all have not yielded to this natural and seducing tendency, nor suffered themselves to be blinded by prejudice or deluded by speculative inquiry. M. Bébian, an accomplished colleague of Sicard, has given us his opinion in the following words: 'Deaf and dumb persons only differ from other men in the privation of a single sense. They judge, they reason, they reflect. And if education exhibits them to us, in the full exercise of intelligence, it is because the instructor has received them at the hands of nature, endowed with all the intellectual faculties.' M. Piroux, the accomplished teacher, now at the head of the institution at Nancy, in France, and formerly of the Royal Institution, expresses himself thus: 'Let us guard against believing, that the sole privation of speech deprives the deaf and dumb of every prerogative of moral life. Judgment and reason, memory and imagination,

are faculties which spring up and form themselves by a natural impulse. The distinction of good and evil, and the moral sentiments, are a necessary consequence of the social relations.' Peter Desloges, a deaf and dumb person, who lost his hearing at the age of seven years, having previously learnt to read, asserts, with something perhaps of hyperbole, of the uninstructed deaf and dumb of his acquaintance, that 'there passes no event at Paris, in France, or in the four quarters of the globe, which does not afford matter of ordinary conversation among them.' Baron Degerando, whose conclusions are the result equally of philosophic inquiry, of personal observation, and of extensive intercourse and correspondence with practical men, uses the following language: 'The deaf and dumb, coming into the world with the intellectual faculties common to all men, though deprived of a sense and an organ, are capable of attention, of reflection, of imagination, of judgment, and of memory.' Of the writers who have so greatly exaggerated a calamity, already sufficiently deplorable, he observes, 'It is worthy of remark that no one among them has cited a single fact in support of his opinion.' He supposes many of these writers to have been influenced by the notions of the Abbé Sicard, which he cannot contemplate without extreme surprise; but which he attributes to the exalted idea which the worthy Abbé had formed of his own success,—an idea, which rendered him desirous of making the contrast between the educated and the ignorant dumb as wide as possible."—Pp. 314, 315.

Sicard also, in his advertisement to his Théorie des Lignes, essentially alters his opinion with regard to the deaf and dumb.

It is not natural, that the mental faculties of the deaf and dumb, will be as frequently called into action, as those of other persons. This regards those only who have been afflicted with this calamity from their nativity. In every case in which deafness has supervened at a later period, the powers of the mind may have received a tolerable share of cultivation prior to that event. The development of the faculties of one who has never heard an articulate sound from the moment of existence must be slow, both on account of want of exercise, and of greater labour being required to conduct mental operations, by the direct intimation of ideas, than by use of the signs which artificial languages afford to represent them.

The deaf have sometimes been found to possess a surprising ingenuity of intellect. The action of the deaf and dumb is a language full of force and animated expression. Yet it would be unjust to conclude that these signs are the limits of their ideas.

To persons ignorant of the language of action, it would, in its present state be scarcely intelligible. However accurate its limitations may be, in the hands of the dumb and deaf, it undergoes a species of abbreviature.

As on the one hand the dialects invented by deaf and dumb persons living separately, are seldom similar, so on the other hand, they are rarely without some degree of resemblance.

It is undoubtedly true that these unfortunate beings are able to draw a distinction between justice and injustice, good and evil, they

are conscious of possessing certain rights, and they cannot but infer the existence of such rights in others. Much depends upon the early situation of the dumb within the family or social circle. Some are neglected and contemned, others are carefully attended and regarded as objects of commiseration. The latter have a greater multiplication of ideas and extension of understanding. Hence may arise a diversity almost infinite. We must now pass from the examination of the natural state of the deaf and dumb, to the consideration of the means to relieve them.

The first measure to be taken is to establish a means of communication between the pupil and the instructor. To effect this, the instructor, who is unacquainted with the language of action, must first act in capacity of pupil. A common language will be established between them in a short period of time. The next essential is, that the instructor should diligently investigate how far the ideas of his pupil extend before instruction, and how far they are just; he should know the extent that he may build upon it, and the limit that he may not exceed it. In the third place, he should avail himself of those materials possessed by the deaf and dumb in common with us, to aid in the formation of a system of ideas, corresponding to that represented by the words of our language. In the fourth and last case, he must present to the eye of his pupil, language under a visible form, and under this idea must teach him to associate its terms directly with their corresponding ideas.

The material instrument which first suggests itself as adapted to the wants of the deaf and dumb, is writing. Writing and artificial articulation, are the sole means which present themselves to our minds as available to the deaf and dumb, and at the same time intelligible among men.

"The field is less circumscribed, when we address ourselves to the second part of our task, which is that of teaching language itself. We may here pursue the course, which nature has made necessary in ordinary education; to give the learner, first a practical knowledge of language, and afterwards methodical instruction in its principles; or we may combine these two branches of instruction into one. The latter is evidently the most cumbrous method, and the most tardy in its results; yet it is the plan of Sicard in his *Cours d'Instruction*, and it has the authority of other respectable names.

"Either plan subdivides itself into two branches, of which the one is logical, the other grammatical. It will be the province of the former to acquaint the pupil with the value of language in discourse, and of the other to develope its principles.

"Each of these ramifications will have two subordinate divisions: the former embracing the significations of isolated words, and the consideration of their combined value in propositions; the latter, the elements of language on the one hand, and the principles of construction on the other. Thus in this second, and more difficult part of the undertaking, four distinct objects present themselves.

"Whichever route, of those distinguished above, it is determined to

pursue, the teacher will be more or less at liberty to make his selection from among all the different combinations of means, which have received the name of methods of instruction. He should not, however, forget the influence of methods upon the development of the intellectual faculties; but, bearing in mind that it will belong to him, as much to supply the pupil with means for self-education, after he is removed from the eye of the master, as to convey positive knowledge to his mind, he should rather choose those methods, which call the mental faculties into most active, continued and beneficial exercise.

"We have now, in general terms, stated that which is to be accomplished in the education of the deaf and dumb. Methods must next occupy our attention, together with the material instruments which they employ, and by the combination of which they are distinguished from one another. Since, however, all methods equally propose to teach, or rather to create for the deaf and dumb a language, we will first present some preliminary considerations, peculiar to no individual system.

"'There is,' says Degerando, 'in the operations of the human mind, a primitive and principal phenomenon, to which all others attach themselves, and upon which the creation and the use of our languages exercise a considerable influence. This phenomenon, which we will denominate intuition, is properly the act by which the mind beholds the objects of its knowledge. Intuition is, to the human intelligence, the sole fountain of all light.'

"Intuition is of two kinds, distinguished by Degerando as real, and rational. The mind, by means of the former, immediately and directly perceives whatever actually exists. This is the intuition of things and their images. The other is the perception of conditions and relations, which subsist among notions previously formed. It is the intuition of reflection and reasoning. It is the immediate act of judging. The objects of real intuition pertain alike to the physical, the intellectual and the moral worlds. It is by rational intuition that we seize the results of comparison, perceive the connection between truths, and foresee consequences in principles. It presides, therefore, in every mental operation.

"The exercise of rational intuition implies the presence of objects, with respect to which it may be exerted. Wherever real intuition exists, rational intuition follows as a consequence. It is involuntary; and were we able, by a single effort, to grasp every subject of thought in all its minute particulars, could we hold them up at once to the immediate vision of the mind, truths, which are now the deductions of laborious reasoning, would become axioms. But the power which we possess, of thus directly contemplating objects, is inadequate to such an effort. It is restricted in its operation within a narrow compass: and were the total of our knowledge limited to that which is strictly intuitive, we should be condemned to a lamentable degree of intellectual poverty. It is by the aid of the signs which language affords, that we are enabled to exercise rational intuition, when the real view of its objects is no longer possible."—Pp. 325—327.

To possess a clear idea of a new and complicated machine, we must first inspect all its parts. When this same machine is called to mind, we retrace rapidly the several individual parts of which the whole is composed. We cannot have a correct idea of this ma-

chine, till all the details are filled up. This, which is the process of real intuition, is slow and laborious. No room would be left for rational intuition, were it necessary that the elements of every complex idea should be thus arranged whenever that idea was recalled to the mind. A single sign takes place of a load of details. Names afford us means of operating upon objects which cannot be submitted to real intuition. Signs, from their simplicity, can be directly contemplated. To pursue this subject further would be to digress from our main point, which is to introduce the principle that instruction in language should be founded upon the study of real objects, and that words should only appear when the real acquisition of knowledge renders them necessary.

We regret to say, we are unable to give a more explicit account of this valuable production. The humane and benevolent princiciples laid down by the author, are sufficient to recommend it to most readers. We now refer it to the public perusal, as a work containing a series of just remarks upon the education of the deaf and dumb, which are likely to be of incalculable benefit to those whose misfortune it is to labour under those two oppressive calamities, the deprivation of the use of speech and of the sense of hearing.

ART. X.—*Vida de Miguel de Cervantes Saavedra, escrita e illustrada con varias Noticias y Documentos Ineditos, pértinecientés a la Historia y Literaria de su Tiempo.* Por D. Martin Fernandez de Navarette. Madrid.

IN English literature, we have not a decent account of the Life of Cervantes, with the exception of that of Lockhart, and even that is far from being correct.

This illustrious man was born in Alcala de Henares, of a noble, but poor family, and was the youngest of four children. The exact time is not stated by his biographer, Navarette, but as his parents were married in 1540, and his baptism took place in October 1547, we may reasonably suppose that he was born in that year. He manifested from his earliest youth, a strong inclination for poetry, and works of invention, a great application, and so much curiosity, that he was in the habit of reading the scraps of paper he found in the streets. He had also a great fondness for the theatre. He studied grammar and polite literature, under a respectable ecclesiastic, named Juan Lopez de Hoyos, who, being employed in the composition of the allegories, hieroglyphics, and inscriptions, to be placed in the church in which the obsequies of the Queen Isabella were to be celebrated in October 1568, called in the assistance of his pupils, amongst whose compositions, those of Cervantes were distinguished. As Juan Lopez did not come to Madrid, until January 1568, when Cervantes was about twenty years of age, the latter must previously have studied under some other master, or in

some other place, and such was the case, for it is known that he studied two years at the University of Salamanca. At the death of Queen Isabella, when Cervantes was in Madrid, an envoy named Julio Aquavia y Aragon, son of the Duke of Atri, arrived in that city, bearing a message of condolence from the court of Rome, to Philip II., on account of the death of his son, Don Carlos. This envoy is described as patronizing men of letters; and since Cervantes speaks of having been in his service at Rome, as valet-de-chambre, it is probable that he became acquainted with him at the time of his mission to Madrid, and being admitted into his family, accompanied him to Italy.

Cervantes could not have remained long in this situation, for, in the following year, we find him a private soldier in the Spanish troops in Italy. He had soon an opportunity of distinguishing himself in his new profession. The Grand Turk, Selim II., in violation of his treaties with Venice, having invaded the island of Cyrus, which belonged to that power, during a period of perfect peace, the Venetians implored the assistance of the Pope, Pius V., who immediately prepared his galleys for service, under the command of Marco Antonio Colonna, Duke of Paliano The papal fleet, having formed a junction with the fleets of Spain and Venice, entered the waters of the Levant, in the summer of 1570, with the view of restraining the progress of the Turks; but owing to some disputes and indecision on the part of the commanders of the concentrated forces, the Turks were allowed to take Nicosia by assault; the season passed without Cyrus being relieved, and the armaments having suffered much from tempests, were obliged to retire to their respective ports. Cervantes served during this expedition as a private soldier under the command of Colonna, probably on board of one of the galleys of Naples, for he passed the winter in that city after the return of the expedition. The court of Rome having united various princes of Europe against the Turks, on the 20th of May 1571, the celebrated league was concluded between his holiness, the King of Spain and the state of Venice. Don John of Austria, natural son of Charles V., was appointed commander in chief of the fleets and armies of the confederacy. Both military and naval forces were immediately assembled at Messina. On the 15th of September, the allied fleets set sail. After relieving Corfu, they fell in with the Turkish armada, on the morning of the 17th of October, in the neighbourhood of Lepanto.

Cervantes being ill of a fever at this time, his captain and comrades urged him not to take part in the action, but he answered that he would rather die fighting for God and his king, than remain under cover to preserve his life at the expense of his honour. He then requested his captain to place him in the post of most danger. His wish was complied with, and the example of his courage so animated the other soldiers in the galley, that they alone killed five hundred Turks, among whom was the commander of the flag-ship

of Alexandria, and took the royal standard of Egypt. Cervantes received three gun-shot wounds in this action, one of which was in the hand, in consequence of which, his left arm was disabled for life, and he contributed his full share to the complete victory of the Christians. He was accustomed ever after to speak of this battle as exceeding in glory all others, and used to declare that he considered his participation in it as cheaply purchased at the price of his wounds.

On account of these wounds, he was detained at Messina until April, 1572, when he joined the forces under the command of Colonna, and served in the Levant, during the operations of that year.

The Venetians having concluded a separate treaty with the Porte in March, 1573, the plans of the confederates were changed, and an expedition against Tunis was resolved upon. On the 24th of September, the ships sailed from Palermo with twenty thousand men on board, among whom was Cervantes. The troops disembarked on the 8th and 9th of October, and Tunis was immediately abandoned to them. Don John returned to Spain, leaving a garrison in the city. After his departure, the Turks collected a large army to recapture the place. The ships which Don John dispatched to aid the garrison were driven off the coast by storms; and he met with a simular fate when he went in person to relieve the place, being obliged to seek shelter in the ports of Sicily from the violence of the hurricanes. Meanwhile Tunis was taken, and Don John returned to Naples. Cervantes remained with his fellow-soldiers in Sicily till the summer of 1575, when he obtained permission to revisit his country. During the period of his service, Cervantes had visited the principal cities of Italy, of which he has given very beautiful and accurate accounts in his works.

The object of Cervantes' returning to Spain was to solicit a reward for his services; and on this occasion he received from Don John of Austria highly recommendatory letters to the king, requesting his majesty to confer on him the command of one of the companies raised in Spain to serve in Italy, as he was a man of courage, and distinguished for his merit and his services. He was also recommended in high terms by the viceroy of Sicily.

He now embarked with his brother Rodrigo, who had also served in the campaign above-mentioned, and with many other military men, to return to Spain; but on the 26th of September, 1575, the vessel fell in with a squadron of galliots under the command of Arnante Mami, an Algerine captain, was attacked by three of the corsairs, and after obstinately maintaining an unequal combat in which Cervantes distinguished himself, was obliged to surrender, and was carried into Algiers with all on board. In the division of the captives, Cervantes fell to the share of Dali Mami, captain of the vessel which had borne the principal share in the action. He therefore treated his captive with great harshness, loading him with

chains, keeping him under guard, and harassing him in various other ways, in order that the misery of his situation might induce him to urge his relations to effect his redemption. A further object in this severe treatment of the captives was to induce them to renounce their religion; and the temptation was considerable, as the renegades received offices and dignities, which gave them a great superiority over the natives of the country. But Cervantes remained unshaken and unseduced, and laboured continually to discover some means of effecting his escape and that of his fellow-captives. At length he prevailed on a Moor, in whom he had confidence, to conduct them by land to Oran, an enterprise which had been attempted by other captives without success. Having commenced their march, they were abandoned on the first day by the Moor, and obliged to return to Algiers and the horrors of captivity. The rigour of Cervantes' treatment was much increased.

Towards the end of the year 1576, some of his fellow captives being ransomed, he was enabled to write to his parents, describing the miserable situation of himself and his brethren. His father immediately pledged all his property, to obtain the means of ransoming his two sons, and the whole family were reduced to poverty. Cervantes, on receiving the money thus raised, began to treat with Dali Mami for his liberation; but the expectations of the Moor had been raised to such a pitch, that he would not accept the sum offered. Cervantes, however, was enabled to ransom his brother Rodrigo in August 1577, and directed him, on his arrival in Spain, to send from the coasts of Valencia, Majorca, or Ivica, an armed ship to a point designated in the neighbourhood of Algiers, which might receive him and the other Christian captives. In order to facilitate this undertaking, he obtained for his brother, letters from two knights of the Order of St. Juan, who were then captives in Algiers, addressed to the governors of the province and islands just mentioned, intreating them to aid in the execution of this plan.

This plan of escape, had for a long time been in the mind of Cervantes, and he had taken the best measures in his power, to secure its success.

About the 20th of September, 1577, which was the time he expected the arrival of the ship, he collected, by the assistance of the gardener, and a fellow named the Gilder, (who had renounced Christianity, and afterwards returned to it), in a cave, in a garden, all concerned in the escape.

In the meanwhile, a ship had been fitted out with great promptitude on the coast of Valencia, and placed under the command of a certain Viana, a ransomed captive, a brave and active man, and well acquainted with the Coast of Barbary. He reached Algiers on the 28th of September, and in the night approached the part of the coast nearest the garden. Whilst he lay there, some Moors happened to pass by on the shore, and seeing the ship and the Christians, began to cry so loud for aid, that the crew were alarmed and

put to sea. A short time after, renewing their attempt to approach the coast, they were taken prisoners, and the plan entirely frustrated.

During the time Cervantes and his companions were congratulating themselves on the hopes of their speedy delivery, but an end was soon put to them, by the treachery of the Gilder. This hypocrite resolved to renounce again the Christian religion, and on the last day of September, in order to ingratiate himself into the favour of Hassan, Bashaw of Algiers, disclosed to him his purpose, and the hiding-place of the captives. The Bashaw was delighted with this intelligence, the captives being forfeited to him by the laws of Algiers, and immediately ordered an armed force to proceed to the cave in which the Christians were concealed, and take them prisoners. Whilst the soldiers were manacling the prisoners, Cervantes, calling the attention of all present, declared with a loud voice, and tranquil manner, that none of his companions were to blame, for that he had persuaded them all to conceal themselves, and had arranged the whole enterprise. The Turks, surprised by so generous a confession, made at the risk of his life, sent a horseman to inform Hassan of what Cervantes had said, and received orders to shut up all the other captives in his baths, but to bring Cervantes before him. He was accordingly conducted, manacled and on foot, to the presence of Hassan, suffering on the way all manner of insult and injuries from his guard and the rabble. In his examination, the Bashaw had alternately recourse to artifice and threats, to induce him to disclose his accomplices. He was particularly anxious to make him accuse an ecclesiastic, named Oliver, who was then employed in redeeming captives in Algiers, for the crown of Aragon. But Cervantes steadily declared that he was the sole contriver of the plan. The Bashaw being wearied out with his constancy, contented himself with appropriating to his own use all the captives who had been seized. He shut Cervantes up in his baths, loading him with chains. In these baths he remained chained and watched with great vigilance till the end of the year. He at length found means secretly to dispatch a Moor with letters for Don Martin de Cordœda, General of Oran, and other persons of distinction, resident in that place, requesting them to send some spies, or trusty persons, with whom he and three other persons confined in the baths, might make their escape. The Moor departed to execute his commission, but unfortunately on his entrance into Oran, he was intercepted by some other Moors, who took possession of the letters he bore, and carried him back to Algiers, where Hassan, seeing the signature of Cervantes, ordered the Moor to be impaled, and Cervantes to receive two thousand strokes.

"Neither these repeated failures nor the great risk of a cruel death, could abate the spirit of Cervantes, or relax his desire to effect his own liberation and that of the other captives. In September, 1579, he met in Algiers a Spanish renegade, a native of Grenada, whose original

name was Giron, but who had taken that of Abderraman on becoming a Mussulman. Cervantes, learning from his fellow-captives that this man had repented of his change of faith, and was desirous to return to his former country and religion, exhorted him repeatedly to reconcile himself to the Catholic church. By his aid he hoped to procure the means to transport himself to Spain, and having obtained from a Spanish merchant at Algiers, named Onofre Exarque, fifteen hundred *doblas*, the renegade Giron purchased a galley with twelve banks of oars, and fitted it for sea under the secret direction of Cervantes, who had agreed with seventy of the principal captives that they should hold themselves ready to embark as soon as notified. But when the moment of departure had nearly arrived, an ill-disposed individual discovered the whole design to the Bashaw.

"Hassan thought it best to conceal his knowledge of the plan, in order to apprehend the Christians in the fact, when he might punish them or take possession of them as forfeited to himself. But it was soon whispered about, that the plan was betrayed, and the Christians were greatly alarmed, particularly Onofre Exarque, who apprehended the loss of his property, liberty, and life; as he supposed that, if Cervantes were taken, he should be put to the torture and compelled to disclose his accomplices. On this account, he pressed him strongly to embark for Spain in a ship which was on the point of sailing, offering to pay his ransom. But Cervantes, perceiving the cause of his uneasiness, and feeling how dishonorable it would be for him to leave his companions exposed to great danger, declined to accept his offer, and endeavoured to tranquillize him by declaring that no torture, nor even death itself would induce him to betray any of his associates, but that on the other hand he should take the whole blame upon himself, in order to save them.

"Meanwhile Cervantes had left the house of his master, and secreted himself in the quarters of Diego Castellano, an old comrade of his, until it should be known what measures the Bashaw would take in consequence of the discovery of this plot. A few days after, proclamation was made, through the public crier, for Cervantes, and the punishment of death was denounced against any one who should conceal him; upon which, fearing that his presence would expose his friend to danger, or that some other Christian might be put to the torture on his account, he resolved to present himself to the Bashaw, and availed himself on this occasion of the services of a renegade, a native of Murcia, named Morato Raez Maltrapillo, an intimate friend of Hassan, whose intercession he hoped might be of use to him. As soon as he came into the presence of Hassan, the Bashaw began to inquire into the circumstances of the plot and the names of his accomplices, and, to terrify him, caused a rope to be put round his neck, and his hands to be tied behind him, as if he were on the point of being hanged; but Cervantes remained perfectly calm, betrayed no one, and steadily and repeatedly declared that he alone had planned and arranged every thing, with four other gentlemen, who had since obtained their liberty, and that none of the other captives were to know of the plot till the moment of its execution. The replies which he made to the charges of Hassan were so ingenuous and discreet, that although not admitted as a justification, they yet served to moderate the anger of the savage, who contented himself for the time with banishing

the renegade Giron to the Kingdom of Fez, and ordering Cervantes to be thrown into prison, where he was kept for five months chained, fettered, vigilantly guarded, and treated with the greatest rigor.

" It is certain that the diligence and sagacity shown by Cervantes, in contriving and conducting these conspiracies, and the courage and firmness with which he had four times met the danger of being impaled, burned alive, or in other ways put to a cruel death, for the sake of saving his companions, gained him such a reputation and made him so formidable in the eyes of the Algerines, that the Bashaw suspected him of meditating an insurrection in Algiers, to destroy that asylum of the pirates of the Mediterranean.

" The example of two brave Spaniards, who had previously made the attempt, and the great number of captives, (more than twenty-five thousand) whose co-operation might be relied on, had in fact inspired him with the idea of taking possession of the city, and delivering it up to his sovereign Philip II.; but the ingratitude and ill-will of some of the conspirators frustrated his plans. The severities of the Bashaw towards Cervantes were not therefore merely the effects of his cruel disposition, but precautions for securing his own safety and that of his republic; and he was accustomed to say, that if he could keep a good watch over that disabled Spaniard, he should consider his capital, his captives, and his vessels, secure. Cervantes was aware of the Bashaw's feelings, and confessed that he was treated with a moderation foreign from the character of Hassan, and unlike his conduct towards the other slaves.

" The sufferings of Cervantes, particularly in the latter years of his captivity, were increased by the distressed condition of the city of Algiers. Hassan, from the time of his entering upon the government, had monopolized all the provisions, which he sold at such prices as he saw fit; the consequences of which were famine, disease, and so horrible a mortality among the poor of the country, that all the streets of the city were filled with the dead and the dying; and though the Christian captives did not experience these calamities in their full force, on account of the interest which their masters had in preserving their lives for the sake of their ransoms, their condition could not but be materially affected by such a state of distress, among a population so numerous, and in a city so miserably regulated. About the same time, the formidable preparations which Philip II. was making for the conquest of Portugal, but without disclosing his object, spread terror among the leading men of Algiers, who imagined that the armament was intended for the reduction of their city; so that they laboured incessantly to strengthen and extend their fortifications, on which the Christian captives were compelled to work day and night. The captives were also guarded with additional strictness, until the entrance of the Spanish army into Portugal showed the true object of the armament.

" While Cervantes was trying such ingenious and hazardous methods to obtain liberty, his parents were labouring at Madrid to effect his ransom. But their means having been exhausted in ransoming his elder brother in 1577, they were unable to advance the sum required. Rodrigo Cervantes, therefore, immediately after the arrival of his elder son in Spain, petitioned for a judicial inquiry into the character, circumstances and services of his son Miguel, and his own inability to ransom him. Such an examination was made, but before any thing was finally determined, the

father died. Meanwhile two ecclesiastics were preparing to go to Algiers, by order of the Spanish Authorities, to ransom captives. Their names were Juan Gil and Antonio de la Bella. Before these commissioners, the mother and sister of Cervantes presented themselves, and put into their hands, the former two hundred and fifty ducats, the latter fifty, to aid in the ransom of a son and a brother.

"The ecclesiastics arrived at Algiers on the 29th of May, 1580, and immediately began to execute their commission. The difficulties which they met with in the case of Cervantes, delayed them some time, since the Bashaw demanded a thousand *escudos* for him, double the price which he had paid, and threatened if this sum were not advanced, that he would carry him to Constantinople, whither he was on the point of returning, the period of his government having expired. In fact, Cervantes had already been put on ship board, loaded with chains, when father Gil, pitying his situation, and fearing that he would lose for ever the chance of recovering his freedom, exerted himself so zealously for his liberation, that the Bashaw at length consented to receive five hundred *escudos* of gold. This sum was made up in part by money borrowed of the merchants, and Cervantes was finally allowed to disembark on the 19th of September, at the very moment when the Bashaw set sail for Constantinople."—Pp. 285—288.

After Cervantes regained his liberty, he requested father Gil to make a formal inquiry into his conduct during his residence in Algiers, in order to clear his reputation from the charges which some ill-disposed persons had preferred against him, before he should present himself in Spain, to seek the reward of his services. A full examination was therefore made, and the result was highly honourable to him.

During his captivity, Cervantes wrote some verses on sacred subjects, and it is not improbable, that he may have composed some of his comedies at that period, since it is known that the captives in the baths were accustomed to celebrate certain festivals, on which occasions, they represented dramas, and recited passages from the poets. Towards the close of the summer of 1580, Cervantes set out for Spain, with several of his late comrades in captivity, and in the summer of 1581, we find him embarked as a soldier, on board the ships which were transporting the troops under the command of Don Figueroa, to assist Don Pedro Valdes, who commanded a squadron sent to reduce Terceira, and to protect the vessels which traded to India. But the two commanders not agreeing, each acted independently, and both returned about the same time to the ports of Portugal, where several Spanish squadrons were ordered to assemble to be prepared to act together the next year. Cervantes and his brother were afterwards present in an action which took place near the island of Terceira, on the 25th and 26th of July, 1582, between the French and Spanish fleets. The two brothers, were also present in the summer of 1583, at the reduction of Terceira.

In all the countries he visited during his military career, he

seems to have been a diligent and accurate observer, forming an acquaintance with the principal men of letters, studying their literature, their politics, and manners, their merits, and their faults: and thus acquiring the stores of knowledge, the strength and correctness of judgment, the grace and elegance of style, and the truth of description, which characterise his works. About this time, he was ordered to Oran, undoubtedly because the company to which he belonged was in garrison there, but the particulars of his residence in that place are not known.

In the midst of so agitated a life he commenced, and about the end of the year, 1583, completed the Galatea, the first work which he published: a pastoral, adapted to the taste of the times. Many of the shepherds in this tale appear to have been real characters, Galatea herself, a lady, to whom he was attached, and whom he shortly after married. At this period of his life, Cervantes wrote comedies to the number of twenty or thirty, which were all performed and well received: but Lope de Vega soon eclipsed all his countrymen in that branch of literature. It was not merely through the love of poetry, or the desire of fame which made Cervantes devote his talent to the drama, but the necessity of exerting himself for the support of his family. His labours and sufferings for the service of his country had not yet met with any recompense; he was more than forty years of age, his left arm was disabled, and he found it difficult to obtain a decent support. In the year 1588, he ceased to write for the stage, and removed to Seville, having obtained a small office under the commissary general for supplying the fleets of the Indies with provisions and other necessaries. The humble and precarious situation which poverty obliged him to accept, he probably regarded as an opening to better employment, or as affording him the means of becoming informed of vacant offices in the Indies, and to enable him to apply for them with better support and recommendations. In May, 1590, he addressed a memorial to the king, setting forth the services he had rendered for twenty-two years without any return, and petitioning for one of the offices then vacant in the Indies, but the memorial was without effect.

About the end of the year 1591, St. Juan de Cruez died of a fever in the convent at Ubeda. Two of his admirers, Donna Anna de Mercado, and her brother, Don Luis de Mercado, who by the advice of that holy man had founded the convent of Segovia, determined to attempt the transfer of his remains to their own convent, which they did, by means of stealing the body. This circumstance having caused a great noise at the time, Navarette considers it as having given rise to the adventure of the dead body in the 19th chapter of the first part of Don Quixotte.

Clement VIII., having canonized San Jacinto, the Dominican convent of Saragossa celebrated solemn festivals, accompanied with poetical contests, which had been announced through the kingdom

of Arragon. On this occasion, Cervantes gained a prize, for a work in praise of the saint.

It is generally believed, that about the year 1598, he was thrown into prison for a time in La Mancha, in consequence of the ill-feeling excited by the execution of some commission with which he was intrusted; and that while in prison, he is supposed to have written the first part of Don Quixote. He himself makes mention that this work was commenced in prison, and from this circumstance, and silence of his enemies and rivals respecting the cause of his confinement, it may naturally be supposed that there was no dishonour attached to it.

It is supposed that Don Quixote, on its first appearance, was received with much neglect by the public; and that Cervantes, knowing that it was misunderstood, endeavoured to attract attention to its true character, by an anonymous publication called Buscapié, in which, pretending to criticise the work, he intimated that it was a satire full of instruction and entertainment, intended to put an end to the injurious habit of reading books of chivalry.

A few copies only of the Buscapié were circulated, and none are known to be extant; however the fact of its appearance is pretty well established. In every probability this work had the desired effect, of bringing Don Quixote into notice, for it went under four editions the same year, 1605, in which it was first published. These were soon followed by others in France, Italy, Portugal and Flanders.

The success with which Don Quixote met, caused the author to be attacked by several writers, who considered themselves as having been satirized in that work. The writers of romance, of knight errantry, and their numerous readers, saw themselves rediculed with keen and elegant irony; several poets were sharply criticised in the examination of Don Quixote's library; and the dramatic writers were provoked by the freedom with which they were treated by Cervantes, in the person of the Canon of Toledo. The resentment of the offended parties gave rise to numerous attacks upon the Don Quixote and its author.

On the 8th of April, 1605, Philip the IVth was born; on the 28th his baptism took place; and on the 30th the queen appeared in public to attend the celebration of mass. Great rejoicings took place at these events, and the ministry being desirous of preserving an account of these celebrations, Cervantes was commissioned to prepare an account of them, which he did, to the general acceptation. The court returned to Madrid 1606, whither our author followed it.

"Cervantes was now old, in straitened circumstances, persecuted by his rivals, neglected notwithstanding his services and his talents, and thoroughly experienced in the ways of men. Thenceforth he devoted himself to a retired and philosophical life, to literature and religious duties. He became a member of some of the religious associations which flourished

at that period, under the patronage of Philip III., a prince of a devotional character, whose influence induced the courtiers and public officers, and the most distinguished scholars and artists, to enter these fraternities. Cervantes was one of the earliest members, having entered in April, 1609. His wife, and his sister Donna Andrea, also devoted themselves to religious exercises in the order of St. Francis, in June of the same year.

"The mutual love and esteem of Cervantes and Donna Andrea were uncommonly strong and enduring. She was older than he, had given up her portion to aid in his ransom, and a few years after had also furnished for the same object a small sum, which she had collected for her own wants. She had been married three times; and having survived all her husbands, Cervantes received her and a daughter by her first marriage into his family. They followed him to Seville, Valladolid and Madrid, and contributed by their labours to the support of the household. She died in October, 1609, aged sixty-five years, and was buried at her brother's expense.

"Meanwhile, Cervantes was labouring to prepare some of his works for publication. The principal was the collection of twelve tales, selected from a number which he had composed at various times, and which were the first originally written in Castilian. Two of these, the *Curioso Impertinente*, and the *Capitan Cautivo*, he had already introduced into his Don Quixote. Finding these well received in Spain, and the former also translated into French, he was encouraged to publish the rest in 1613, dedicating them to the Count of Lemos. He called them *Ejemplares* (exemplary), to indicate that their moral tendency was good, whereby they were distinguished from the greater part of the Italian tales. He says in his preface, that if he supposed they could awaken evil desires or thoughts in any reader, he would rather cut off the hand with which they were written, than give them to the public. In his dedication to the Count of Lemos, he says that he sends him twelve tales, which, if they had not been framed in the workshop of his invention, might compare with the best of their kind.

"In one of these stories Cervantes shows his superiority to the prejudices of the time, by ridiculing the popular belief in witchcraft." Pp. 300, 301.

Towards the close of the year 1614, Cervantes published his *Viage al Parnaso*, a poetical review of contemporary Spanish poetry, intended to reform the abuses which had crept into it. This was followed by an *Adjunta al Parnaso*, with the same object as the former.

In September, 1615, eight of his comedies, and as many *entremeses* were published; but these latter are of no value, and it is generally believed, that those at present existing, bearing his name, are not really his, but that his name has been prefixed to them by the booksellers.

"At this period *Justas Poéticas*, so called, were common in Spain, where they had been long established. These were poetical contests, perhaps in imitation of the tournament. One of these trials of skill took place in Madrid in 1614, on the occasion of the beatification of Santa Teresa. On this occasion, poems in Latin and Spanish were recited before a large and distinguished audience. Cervantes took part in the contest with a *cancion*, which was published in the selection of the pieces presented on this occasion. He obtained permission to print the second part of Don

Quixote in October, 1615, having been induced to hasten the completion of the work by the appearance of Avellaneda's continuation.

"Cervantes dedicated the second part of Don Quixote to his patron, the Count of Lemos, and after setting forth the miserable state of his health, recommends to his notice the Persiles and Sigismunda, a work which, in spite of his illness, he promised to complete within four months. It is a novel written, as the author professed, in imitation of the Theagenes and Chariclea of Heliodorus. This work was finished, as he had promised, by the spring of 1616, when the increasing severity of his illness interrupted his labours, and did not permit him to prepare either a dedication or a preface. Such was his condition on Sunday, the 2d of April, that, not being able to leave his house, he was admitted there into the third order of St. Francis, the habit of which he had assumed at Alcala on the 2d of July, 1613; but as the nature of his illness admitted of some intervals of alleviation, he hoped to obtain more radical relief by a change of air and diet, and resolved to go to Esquivias, to visit the relations of his wife. Some days later, being convinced that little was to be expected from the change, and desirous to die at home, he returned to Madrid in company with two friends. On the road an incident occurred, which afforded him matter for the preface to his last work, and led him to give the only particular account which we possess of his illness.

"'As he and his companions were riding from Esquivias, they were accosted by a stranger, who called loudly to them to stop. They waited for him to come up, when he turned out to be a student, riding on an ass, and complaining that they travelled at such a rate that he could not overtake them to join their company. One of the party apologized, laying the blame on the horse of sennor Miguel de Cervantes, which was inclined to travel briskly. Scarcely had the student heard the name of Cervantes, whom he held in high esteem, though not personally acquainted with him, than he threw himself from his beast, and seized Cervantes by the left hand, expressing his admiration in passionate terms. Cervantes, who unexpectedly found himself overwhelmed with praises, replied with the modesty and courtesy natural to him, embracing his admirer and begging him to remount and travel in company with him. The student complied, and then followed the dialogue, which gives us an idea of the illness of Cervantes, and which he relates in the following terms. 'We drew our bridles a little tighter, and pursued our journey with a moderate pace, conversing on my illness, when the good student immediately pronounced my fate, saying, this disorder is the dropsy, which all the water in the ocean could not cure, even though it were sweet and fresh. You must abstain, sennor Cervantes, from drinking, but do not fail to eat, and this regimen will cure you without the aid of medicine. Many persons have given me the same advice, said I, but I cannot help drinking, as if I were born for nothing else; my life is drawing to a close, as I see by the rate of my pulse, which cannot continue to beat beyond the next Sunday. You have arrived just in time to make my acquaintance, but I shall have no opportunity to show my gratitude for the disposition which you have manifested towards me. By this time we had reached the bridge of Toledo, and I entered that way, while he took the direction of the bridge of Segovia.' Soon after this dialogue, which shows that Cervantes maintained the cheerfulness of his spirit to the borders of the grave, the violence of his

disorder increased, and all hope being extinguished, he received extreme unction on Monday, the 18th of that month."—pp. 304, 305.

After having made his will with great serenity, and enjoined the performance of certain acts for the good of his soul, he expired on the 23rd of April, 1616, ordering his body to be buried in the convent of the Nuns of the Trinity. Thus ended the life of probably the greatest genius that Spain ever produced; and although his countrymen were incapable of properly estimating his talent during his life, his fame will justly descend to the latest period of posterity.

ART. XI.—*The Library of American Biography.* Conducted by Jared Spark, vol. 1. Boston. 1834.

THIS is a work of unusual interest to an American, and also to a native of this country, as far as it displays to emulation the distinguished talents of men eminent in literature, or in military renown. A work comprising the lives of all the celebrated characters, that have adorned America from the time of its discovery to the present period, and thus handing down to posterity the virtues of the great and glorious, must be doubly interesting to one who considers himself as a descendant, or perhaps a contemporary of such exalted personages; but it likewise carries away the admiration of the whole world. This too, is a subject, which has never been touched upon till now, and consequently from the scenes of novelty which it opens, it becomes a subject of general interest and inquiry. It is entirely unnecessary to dilate on the qualifications of the author for such an undertaking, since by the nature of his pursuits, he is facilitated to execute it in so splendid a manner. We will endeavour to give a brief summary of its contents, by hastily running over the history of some of the most distinguished characters.

The first on this list of celebrated men is General John Stark, the heir of Bennington. He spent his earlier years at Derryfield, now Manchester, in New Hampshire. At the age of twenty-four he was taken prisoner by the Indians, while engaged in a hunting excursion. He was afterwards ransomed, after having spent a considerable time among the Indians, during which he made himself acquainted with their character and habit of life, and secured their attachment and respect by exhibiting those masculine qualities, which are accounted by that people as the highest virtues. In 1754, he distinguished himself by his valour and cool sagacity, in the seven years' war. The following year an expedition was carried on against Crown Point, and Spark was promoted to the rank of Lieutenant. He was, some time after, advanced to the rank of Captain. His patriotic principles were confirmed, when at the breaking out of the revolution, he sacrificed all his dignities and emoluments as a British officer, to the good of America. At Lexington his

talents were again conspicuous, as well as at the battle of Bunker Hill. At Trenton and Princetown, he was by the side of Washington. Spark received new honours after the battle of Bennington. He was congratulated by the State, and was reinstated in the continental service, where he continued until the close of the active period of the war. We must give the military achievements of Stark at the battle of Bennington, as related by Mr. Everett.

"On the morning of the 16th, General Stark was joined by Col. Symonds, with a body of Berkshire militia, and made preparations for an attack, according to a plan proposed by the General and agreed upon in a council of war.

"The German troops, with their battery, were advantageously posted upon a rising ground at a bend in the Wollamsac (a tributary of the Hoosac,) on its north bank. The ground fell off to the north and west, a circumstance of which Stark skilfully took advantage. Peter's corps of Tories were intrenched on the other side of the stream, in lower ground, and nearly in front of the German battery. The little river, that meanders through the scene of the action, is fordable in all places. Stark was encamped upon the same side of it as the Germans, but, owing to its serpentine course, it crossed his line of march twice on his way to their position. Their post was carefully reconnoitered at a mile's distance, and the plan of attack was arranged in the following manner. Colonel Nichols, with two hundred men, was detached to attack the rear of the enemy's left, and Colonel Herrick, with three hundred men, to fall upon the rear of their right, with orders to form a junction before they made the assault. Colonels Hubbard and Stickney were also ordered to advance with two hundred men on their right and one hundred in front, to divert their attention from the real point of attack. The action commenced at three o'clock in the afternoon on the rear of the enemy's left, when Colonel Nichols, with great precision, carried into effect the dispositions of the commander. His example was followed by every other portion of the little army. General Stark himself moved forward slowly in front, till he heard the sound of the guns from Colonel Nichols's party, when he rushed upon the Tories, and in a few moments the action became general. It lasted, says Stark, in his official report, two hours, and was the hottest I ever saw. It was like one continued clap of thunder. The Indians, alarmed at the prospect of being enclosed between the parties of Nichols and Herrick, fled at the commencement of the action, their main principle of battle arr.y being to contrive or to escape an ambush or an attack in the rear. The Tories were soon driven over the river, and were thus thrown into confusion on the Germans, who were forced from their breast-work. Baum made a brave and resolute defence. The German dragoons, with the discipline of veterans, preserved their ranks unbroken, and, after their ammunition was expended, were led to the charge by their Colonel with the sword: but they were overpowered and obliged to give way, leaving their artillery and baggage on the field.

"They were well enclosed in two breast-works, which, owing to the rain on the 15th, they had constructed at leisure. But notwithstanding this protection, with the advantage of two pieces of cannon, arms, and ammunition in perfect order, and an auxiliary force of Indians, they

were driven from their intrenchments by a band of militia just brought to the field, poorly armed, with few bayonets, without field-pieces, and with little discipline. The superiority of numbers, on the part of the Americans, will, when these things are considered, hardly be thought to abate any thing from the praise due to the conduct of their commander, or the spirit and courage of his men.

"The enemy being driven from the field, the militia dispersed to collect the plunder. Scarcely had they done so, before intelligence was brought that a reinforcement from the British army was on the march, and within two miles distance. This was the corps of Colonel Breyman, which had been dispatched by General Burgoyne, on receiving from Baum intelligence of his position. The rain of the preceding day and the badness of the roads had delayed his arrival: a circumstance which exercised a very important influence on the fate of the battle. On the approach of Breyman's reinforcements, the flying party of Baum made a rally, and the fortune of the day was for a moment in suspense. Stark made an effort to rally the militia: but happily at this juncture, Colonel Warner's regiment came up fresh and not yet engaged, and fell with vigor upon the enemy.

"This regiment, since the battle fought at Hubbardston, had been stationed at Manchester. It had been reduced, by the loss sustained in that action, to less than two hundred men. Warner, their Colonel, as we have seen, was at Bennington, and was with General Stark on the 14th. The regiment at Manchester was under the command of Major Samuel Stafford. In consequence of the absence of a large number of the men on a scouting party, and other causes, it was not possible to put the regiment in motion on the 14th; on the 15th they marched for Bennington. Owing to the heavy rain of that day, it was near midnight, when the troops arrived within a mile of Bennington. Fatigued with the march of the preceding day, their arms and equipments injured by the rain, and their ammunition scanty, a considerable portion of the ensuing day was exhausted, before the men could prepare themselves for battle. The first assault had been made in the manner described, and the enemy driven from the field, before this regiment came into action. At the most critical moment of the day, when the arrival of Breyman's reinforcement threatened a reverse of its good fortune, Warner's troops appeared on the field. Stark, with what men he had been able to rally, pushed forward to his assistance, and the battle was contested with great obstinacy on both sides till sunset, when the enemy were obliged to give way. General Stark pursued their flying forces until dark, and was obliged to draw off his men, to prevent them from firing at each other under cover of night. 'With one hour more of daylight,' as he writes in his official report, 'he would have captured the whole body.' The fruits of the victory were four pieces of brass cannon, several hundred stand of arms, eight brass drums, a quantity of German broadswords, and about seven hundred prisoners. Two hundred and seven were killed upon the spot; the number of the wounded was not ascertained. Colonel Baum was wounded and made a prisoner, and shortly after died of his wounds. The loss of the Americans was thirty killed and forty wounded.

"Several anecdotes of this affair have been recorded, and the following deserves a repetition. Among the reinforcements from Berkshire

county came a clergyman, with a portion of his flock, resolved to make bare the arm of flesh against the enemies of the country. Before daylight on the morning of the 16th, he addressed the commander as follows: 'We the people of Berkshire, have been frequently called upon to fight, but have never been led against the enemy. We have now resolved, if you will not let us fight, never to turn out again.' General Stark asked him 'if he wished to march then, when it was dark and rainy.' 'No,' was the answer. 'Then,' continued Stark, 'if the Lord should once more give us sunshine, and I do not give you fighting enough, I will never ask you to come again.' The weather cleared up in the course of the day, and the men of Berkshire followed their spiritual guide into action."—Pp. 471—473.

He died in 1822, at the advanced age of ninety-four, after a life spent in the honourable service of his country. We are happy that Mr. Everett, has presented to the public the history so instructive and entertaining of so eminent a character.

The life of Charles Brockden Brown, is the next given by the author, as related by Mr. William H. Prescott. It is written with an elegance of style, which paints in lively colours the deep melancholy which appeared to overcloud his mind. His character is finely delineated by Prescott. The truths of religion finally overcame the erroneous opinions entertained in his youth, and he died in the full conviction that the wild theories he had adopted were unprincipled and grossly absurd.

Brown's literary fame rests principally in his romances, though they are carelessly composed, and are written perhaps more to relieve his mind, than to gain public approval. His first production was Weiland, published in 1789; its model is chiefly Godwin. The greatest deficiency in most of Brown's works, is a want of taste. Nature and probability are sometimes sacrificed to produce a striking effect. His style is often affected, sometimes vivacious and nervous. Notwithstanding his defects and imperfections, his excellencies still cause him to be read and admired. Mr. Prescott, in his remarks on his writings, has shown himself sensible to his author's deficiencies, as well as alive to his beauties. In 1809, his long illness began to be more alarming. He made some journies for the benefit of his health, but without any salutary effects. At the entreaties of his friends he at last, though extremely averse to travelling in foreign countries, determined to take a voyage to Europe the following spring. But unfortunately he was taken with a violent pain in his side, about November; and after some time of excruciating suffering, he closed his existence in the thirty-ninth year of his age, in 1810.

The history of the renowned Montgomery is next given, as related in that purity of style by General Armstrong, which makes us regret so little is known of his short but eminently distinguished career. However short his existence might be, it was sufficiently long to acquire a deathless name, and to make his loss regretted as

a public calamity. He was born in the North of Ireland at Raphoe in 1736. At eighteen he procured a commission in the British army, and entered upon active service in this country; the regiment to which he belonged, being attached to the expedition prepared in 1758 for the capture of Louisburg.

He was distinguished in this expedition, and also in the enterprise of the reduction of St. Pierre and Fort Royal, in Martinico, and of Havana in Cuba. We can derive no knowledge of his personal history, from his retirement from the army in 1772, till we find him devoting himself to peaceful employments in this country. In 1775, he was chosen member of the first Provincial Convention, held in New York. Two months afterwards he received the commission of a Brigadier-General. The attention of the National Congress, was early bent upon the invasion of Canada. Two armaments were formed to take the routes, one by the Sorel, the other by the Kennebec. Montgomery was appointed commander of the armament destined to pursue the route by the Sorel. His achievements are here well known; he entered Montreal, and in spite of every opposition, prepared for the reduction of Quebec. It is unnecessary to repeat how that eventful day was decided. It is sufficient to say, that it proved fatal to General Montgomery, after receiving wounds in front of the British cannon, he fell a lifeless corpse. He was afterwards honourably interred within the city, gratefully respected by his friends, and admired by his enemies. He died in the fortieth year of his age.

Towards the close of the volume, Mr. Spark has brought to light, several particulars of that extraordinary character, Ethan Allen. We have not been able to ascertain the time of his nativity, but he emigrated with several others, from Connecticut to the New Hampshire Grant, which have since been erected into the flourishing state of Vermont. The claim of these grants had long been contended for by New Hampshire and New York, as will be seen by the following extract:—

"The title to these grants had long been the subject of controversy between New Hampshire and New York; Wentworth, the royal governor of the former, had issued patents, under which tracts had been sold to a great number of settlers, among whom were Allen and his brothers. New York, in order to assert her claim, granted new patents to other persons, covering the same lands on which the grantees of New Hampshire had established themselves; and a series of difficulties forthwith arose, which were not quieted for many years. Allen, whose boldness and energy gave him a strong ascendancy over the minds of those around him, took a very leading part in the vindication of what they deemed their legal rights. The settlers, or, as they were called Green Mountain Boys, resisted the New York claim in the courts of Albany, but the judgments of the courts being unhesitatingly pronounced against them, they took decisive means to prevent their execution, by dispossessing those who entered under them, and treating the civil officers with the least imaginable ceremony. We may perceive to what extent the exasperation on

both sides was carried, from the fact, that a proclamation was early issued by the Governor of New York, offering a reward of twenty pounds for the apprehension of Allen, and that of eight other persons, who were associated with him. A law of a most remarkable character was enacted by the assembly of New York, in opposition to the same individuals. This law began with naming Allen and several others; it then empowered the Governor and Council to issue an order, requiring those persons to surrender themselves to justice; if they neglected to do this, they were to be adjudged and taken as convicted, and to suffer death if indicted for a capital offence, and the Supreme Court was empowered to award execution, in the same manner as if there had been an actual trial and sentence. As Allen himself remarked, these printed sentences of death were not particularly fatal, but it is difficult to say to what extent the contest would have been carried, had not the Revolutionary troubles at this time begun to absorb all others.

"The capture of Ticonderoga and Crown Point, which was effected by parties from Connecticut and the New Hampshire Grants, with Allen at their head, gave an indication of the spirit which he was about to enter on the new scene of conflict. When this had been accomplished, he took command of the former post, and began to meditate the conquest of Canada; an enterprise, the credit of suggesting which belongs to him, and which, had it been undertaken by Congress with more activity and vigour, would not improbably have proved successful. A regiment of Green Mountain Boys was raised, under the authority of the Provincial Congress of New York, to be connected with the army; for some reason, not now remembered, Allen did not receive the command of it, but attached himself to General Schuyler's army as a volunteer. He was first employed to circulate an address, issued by the General, among the inhabitants of Canada, and to ascertain their disposition; this commission he executed in a very satisfactory manner; and he next proceeded to raise a corps of Canadian volunteers, with which he was about to join the army of Montgomery, now the leader of the Canada expedition, when, at the suggestion of Major Brown, whom he encountered at the head of another party, he was induced to lend his aid in an attack on Montreal. The plan was laid, and Allen's part of it was faithfully performed; but as Brown did not adhere to his, Allen was compelled to surrender. General Prescott, the commander of the British force at Montreal, after threatening him with a halter at Tyburn, gave orders that he should be bound hand and foot, and sent on board a vessel of war. With his ankles confined in shackles, to which was attached a bar of iron eight feet long, and with his hands in fetters, he was accordingly thrust into the lowest part of the vessel, without a bed or any article of furniture."—Pp. 481, 482.

He was first taken to Quebec, and shortly afterwards sent over to England, where he was treated with less severity. The hardships and miseries he had to undergo, during the whole period of his confinement, would appear to fix an indelible disgrace on his tormentors, in the eyes of the present civilized and enlightened world; but though patriotism was his sole offence, it bore the united names of treason and rebellion. However, the British government at length began to consider Allen and his companions as prisoners of

war, and sent them to their own country. On his return, until his final liberation, he had additional hard usage and repeated cruelties to support. To take a closer view of his character, it may perhaps afford entertainment to our readers, to notice briefly an incident related by Mr. Spark, which occurred towards the close of his confinement. Allen and some of his companions were embarked on board the Lark frigate, under Captain Smith. They were treated with unusual kindness and respect by the captain; and Colonel Allen was, to his great surprise, once more invited into the ship with the civility due to a gentleman. The interview is given by himself. He tells us that after being courteously handed into the vessel, he was invited to dine with the captain. This came upon him so unexpectedly, that he could not suppress his emotions. He informed the captain of the anxiety he felt when he reflected that he was so situated as never to be able to compensate the favour. Captain Smith's observation was, that this world was so mutable, that one gentleman never knows but it may be in his power to help another. This remark was soon verified. A conspiracy was set on foot against the captain and principal officers, by an American captain lately taken prisoner, and who revealed his bloody intentions to Allen, hoping that he would co-operate in bringing over all the prisoners to his cause. Allen magnanimously declared he would have no hand in such a treacherous and base scheme, that it would be the height of wickedness and shame to behave thus ignominiously to one who had treated them with all possible gentility; moreover, that he would personally defend the captain's life. Allen finally quelled the conspiracy, by promising never to divulge the matter, if the leaders would forego their designs.

Congress endeavoured to repair the wrongs of one who had thus suffered in their cause, by granting him a commission of a colonel in the continental army; but it is unknown, whether he ever entered upon actual service. When the old controversy between Vermont and New York was renewed, Allen engaged in the conflict, exerting all the powers of body and mind of which he was master. He continued actively devoted to the cause of his country, till the close of the war, when he retired and devoted himself to rural occupations. The remainder of his life was not very distinguished. He died at Burlington in 1789. We must now conclude our review of this admirable and entertaining production.

We may, however, be permitted to add from the author's preface, that this beginning is but an experiment, to be continued if circumstances are favourable. The author proposes to bring out four volumes within the compass of a year, if it should meet with the encouragement of the public.

ART. XII.—*Thirty Years' Correspondence between John Jebb, D.D. F. R. S. Bishop of Limerick, Ardfert, and Aghadoe, and Alexander Knox, Esq., M. R. I. A.* Edited by the Rev. CHARLES FORSTER, B. D., Perpetual Curate of Ash-Next-Sandwich: formerly domestic Chaplain to Bishop Jebb. In 2 Vols. 8vo. London: James Duncan. 1834.

IT is necessary at the outset, to place before the reader, the peculiar circumstances under which this correspondence has sprung up. The John Jebb, one of the writers of the letters spoken of in the title-page, was the late Bishop of Limerick, who died in London, in the 59th year of his age, on the ninth of December last.

Mr. Knox, the other of those writers, appear to have been a gentleman who devoted much of his time to religion, and he kept up the present communication with his friend on that subject. At an early period, the Bishop of Limerick published a letter on Christian preaching, in his introduction to Burnet's lives, and of which he thus speaks: "The above letter is almost the earliest of a series, terminating only with the year of Mr. Knox's death (1831), which the editor has long cherished among his choicest treasures. How much he owes to this correspondence, how much to the free, familiar, yet paternal converse, of many thousand happy hours. How much to the uniform example of this true-hearted Christian philosopher, will not be known, until the secrets of all hearts are disclosed.

But this much he can say with certainty, that scarce a day elapses, in which some energetic truth, some pregnant principle, or some happy illustration (and those illustrations were always powerful arguments) does not present itself, for which he was primarily indebted to the ever-salient mind of Alexander Knox.

The letter he alluded to, experienced a most favourable reception in this country, and has been twice republished in North America, and a second time in a separate form for distribution among the episcopal clergy. Upon the death of his friend he received back his part of the correspondence, and delivered the manuscripts, not long before his departure hence, into the care of the editor, to be published. Immediately after the death of the Bishop, Mr. Forster, directed his thoughts to the injunction he had received from his most Rev. Superior. This duty he has at length accomplished, and he feels happy in having it in his power, to dedicate these remains to one whom the Bishop loved the best of brothers, and honoured as a second father. The name of Bishop Jebb is sufficient to recommend his share of the correspondence to public notice. It may be mentioned as an interesting fact, that Mr. Knox always considered the Bishop's familiar letters as, in point of composition, the most perfect of his writings.

At the commencement of this correspondence, the late Bishop

Jebb was curate of Swanlinhar, with the usual salary of 50*l.* per annum. In one of his first letters to Mr. Knox, he informs that gentleman, that having much time on his hands on account of his parochial duties not fully occupying it, it was his intention to study Greek with care; chiefly with a view of becoming acquainted with the New Testament. And for this end he dedicated two hours each day to the study of this language; commencing with the historians Herodotus, Thucidydes, &c. In his second letter, he speaks in the highest terms of the then Bishop of Kilmore. About this time, also, he appears to have commenced a correspondence with a Mr. Stopford, a professor of divinity; for in one of his letters he speaks of this correspondence as affording him great pleasure. "Every letter," he observes, "that he received from this gentleman, was calculated to make him a better Christian; and that he had the most sanguine hopes, that the exertions and example of this man, would have a happy influence on the minds and habits of the young ecclesiastical students. The Rev. Joseph Stopford, D.D., mentioned above, was then Fellow of Trinity College, Dublin, and afterwards rector of Letterkenny. In Mr. Knox's second letter to Mr. Jebb, he introduces the subject of Christian oratory; and observes, that the indispensable requisites of it can arise only from a Christian mind and heart; he complains that there was great want in the preaching of his day; it was without spirit, and the result only of a kind of intellectual pumping; there was no gushing from the stream. Our Saviour, speaking to the woman of Samaria of the happiness which his religion would bring into the bosoms of those who cordially embraced it, elegantly and expressly represents it by a well of water in the breast, 'springing up into everlasting life.' Where this, he observes, is in a minister, it will be felt to be living water, from the pleasure and refinement which it conveys to minds hitherto unaccustomed to such communications. But you ask, says he, what I conceive to be the mean between cold morality and wild enthusiasm? To this I answer that the mean between all extremes is Christianity; an attention to the exhibition of Christian religion as taught by himself; as exemplified in the Acts of the Apostles; and as expanded and ramified in the epistles, particularly those of St. Paul, is the best and only preservative against coldness, fanaticism, and superstition. But few men take this direct view of Christianity. Most men take up the gospel, with a set of prejudices, which, like so many inquisitors, lay the Christian religion on a bed of Procrustes; and, as it suits them, either mutilate it by violence, or extend it by force. Coldness is a far more dangerous extreme than too much heat; the one may consist with real goodness; nay, may be the consequence of real goodness, commixing with a perturbed imagination, or an ill-formed judgment: but coldness can be resolved only into an absolute want of feeling. Enthusiasm is excess, but coldness is want of vitality. The enthusiast, in a moral point of view, is insane, which implies a possibility of recovery, and

a partial recurrence of reason ; but the cold person is like an idiot, in whom reason never shows itself, and in whom convalescence is desperate. But it must be remembered, that he who has really found the mean between these two extremes will be reckoned enthusiastic by those who are in extreme coldness. When a person stands on a middle point between two others, who are, with respect to him, strictly equidistant, he must from the inevitable laws of perspective appear to both not to be in the middle, but comparatively near the opposite party. So it is with the man, who has learnt the middle course between these two extremes, he must make up his mind to be censured by both parties : by the enthusiast as being cold ; and by those who are really cold as an enthusiast. Christianity is represented in most pulpits rather as a scheme of external conduct, than as an inward principle of moral happiness and moral rectitude. Moral sermons generally contain admonitions, and directions as to right conduct ; but what David so earnestly entreated of the Almighty is seldom touched upon. " Create in me a a clean heart, O God ! and renew a right spirit within me." This is the main tendency of the New Testament. Make the tree good, says Christ, and its fruit will also be good. This manifestly implies, that such an alteration must be effected in the minds and affections of such as are desirous of becoming truly Christians, that such a moral change is to be produced in them, as cannot be the consequence of any natural cause. " Except a man be born again," says our Lord, " he cannot see the kingdom of heaven." Now what do these expressions imply, but that they carry along with them a far deeper, and more mysterious view of Christianity, than is, generally adverted to. Some divines endeavour to explain these and similar passages, as if they referred more to a relative and extrinsic than to a real and internal change, and that they mean merely proselytism from heathenism to Christianity, and imitation into outward church privileges ; but this is a miserable mode of interpretation, and inconsistent with the whole tenor of the New Testament. It is not Heathenism, but Moral Evil, which is here pointed out, as the great source of human misery: and the aptitude of the Gospel to overcome this Moral Evil, is what is principally dwelt upon, as its great and leading excellence. If these passages are explained in a moral sense, how deep is their import! Christianity, Mr. Knox observes, is really what St. Paul called it — THE POWER OF GOD UNTO SALVATION. When a deep sense of inward depravity and weakness excites a man to seek divine knowledge and grace, in order to the enlightening of his mind, and the renewing of his heart,—when this view produces conscientious watchfulness ; excites to fervent habitual devotion, and represents to the mind the inestimable love of God in the redemption of the world by his Son, then by degrees the true Christian character begins to form itself in the mind, and the great things spoken of Christianity begin to be understood, because they begin to be felt.

Religious duties once burthensome becomes delightful: self-government becomes natural and easy: reverential love of God, and gratitude to the Redeemer, producing humility, meekness, active and unbounded benevolence, grow into habitual principles: cheerfulness reigns within, and diffuses its sweet influence over the whole conversation and conduct. All the innocent, natural enjoyments of life, become inexhaustible sources of comfort, and the close of life itself is contemplated as the end of all pain, and the commencement of perfect and never-ending felicity. This Mr. Knox conceives to be a faint sketch of that state of mind, to which the Christian preacher should endeavour to bring himself and his hearers; and this he takes to be our Saviour's "well of waters springing up into everlasting life." He lays down three points, which should form the great features of Christian oratory:—

First, The danger and misery of an unrenewed and unregenerate state, whether it be of the more gross or of the more decent kind:—

Second, The absolute necessity of an inward change: a moral transformation of mind and spirit:—

Third, The important and happy effects, which takes place when this change is really produced.

The second error, which preachers commit, Mr. Knox imagines to be their exhorting men to *do* without impressing on them a sense of their natural inability to *do any thing that is right*, and their consequent need of divine grace:—first, to strengthen anew by good works; and second, to strengthen them by daily and hourly assistance. The second error is the natural cousequence of the first. For where an inward and spiritual is not insisted on, as primarily and essentially necessary in religion, there the whole system must be vain and superficial. It is a remarkable, but not less true, fact, that the meditation of Marcus Antonius, contain a much stricter plan of moral self-government, than is set forth by the generality of modern Christian preachers. He seems to have examined more strictly, the different states of mind and temper, than the generality of pulpit instructors do. And Cicero's beautiful picture of a virtuous man, comes nearer to the New Testament, than the view taken of it by the far greater number of Christian moralists. Mr. Knox observes in his letter, that he has no doubt, but that his views of Christian oratory, will be considered by many as enthusiastic and fanatical; but he justifies them as being similar to those adopted, on this subject, by those divines, who have been most noted for their learning and piety, since the Reformation; and in truth of this assertion, refers to different passages in their writings.

It was about this time that Bishop Jebb commenced his lectures on the New Testament, for in a letter of his, dated 13th May, 1801, he alludes to this circumstance; and in the same letter he asks Mr. Knox for some advice on his best mode of treating methodists, as

they appeared to have formed a considerable portion of his (Mr. Jebb's) flock; and he had great hopes of bringing them over to his way of thinking.

Soon after this letter, Mr. Jebb was removed to Cashen, where he continued these strictures on the Scriptures. In a letter dated from Cashen, Dec. 1805, Mr. Jebb mentions the circumstance of a young man, who had just received orders, and his observations on this subject appear so correct, and we fear, so applicable to the generality of the aspirants to holy orders, that we shall give the entire of this letter.

"Along with this, I send you a copy of my ordination sermon; which I was under the necessity of making later in the week, than you would recommend. The truth is, that, between preparing my examination, the examination itself, and some indisposition, I found myself, pretty late on Saturday, without any other provision for the next day, than an arranged plan in my head, and, on trying to write, that evening, I could compass no more than the introduction (p. 1.); being really exhausted, by the prelections I had been giving for three days. In this dilemma, I thought it best to go to bed at eight o'clock, and rise very early. Accordingly, at one o'clock, A.M., I rose and put to paper what I now send. It gives me much pleasure to think that Mr. ——, the new priest, is under very serious impressions. He is certainly, just now, rather ignorant; but his dispositions are excellent. He took hugely to all that was said; and has this morning gone home, with a gig full of books, and a very thorough resolution to give himself up wholly to his profession. M. was present at the examination; and I think received some information which gave him pleasure.

"In the sermon I now send, you will recognize a sentiment from Ogden, about 'all the distinctions of morality.' It came forcibly to my mind; and though I had not the volume to refer to, I put it down, possibly much marred in the expression. You will also recollect Seneca's sentiment 'Spiritus Dei res delicata,' &c.; but you will, perhaps, still more easily recognize ideas, which I have imbibed from yourself and from 'the Hints.' I know not whether I have, in any measure, made them my own, by the phraseology; but whether they be deemed stolen goods or not, they were too much to my purpose to be set aside.

"I fear this letter is incoherent, for I have been hurried; and I am sure it is ill and crookedly written, for I have been almost in the dark. But you will excuse errors. Pray do write very soon to

"Yours most affectionately,

"JOHN JEBB."

In many of Bishop Jebb's letters there breathes a spirit of Christian charity, which is truly admirable; and he commences one of his letters in the following manner:—

"I enclosed you a letter, which I received from the unfortunate ——, on my return here. Possibly you might have it in your power, to convey him, for me, a couple of guineas, which I will thankfully repay you: Mr. Bourne can most probably let you know where he is to be found. I wish some little subscription could be set on foot for him: for whatever have been his faults, the poor man seems deeply sensible of them; and it is a

shocking thing to see a clergyman of our establishment, reduced to the deplorable state he is in. Should you think well of a subscription, I will write about it to my brother, who I am sure would aid it; and I would then try and give somewhat more, than I have commissioned you to give for me. The fact is, I fear it would not be of any service to trust more money in his own hands, than the little pittance I speak of for the present. Were there a subscription, I think it should be in some person's hands for his use."—P. 254.

He appears to have been indefatigable in his ministerial duties while at Cashen, and at one time, although labouring under indisposition, performed his own and another's duties, whilst a regiment of soldiers was quartered there, in order that his coadjutor might be enabled to follow the advice of his physician. Soon after Dr. Jebb's appointment to the See of Limerick, which took place in 1823, he appears to have suffered much from indisposition, and was accustomed to keep his bed for weeks together. In his pastoral charges to his clergy, he was animated by an earnest desire to promote true clerical feeling amongst them, and as he expresses himself in one of his letters, " conciliation without compromise." How far they were calculated to attain these ends, the reader will be enabled to judge from the following extract from Mr. Knox's letter to his Lordship on the first charge :—

" Your charge reached me on Thursday, and I received your letter yesterday morning. I lament you have been so much an invalid, but I am consoled by the favourable account you are still able to give. I know by thorough experience, how comfortable it is, under the pressure of present pain or sickness, to be still satisfied, that the constitution is radically sound. The distressing uneasiness which I suffered through the winter, abated in proportion as the spring advanced, and had the weather continued good, I might have had an intermission, instead of a remission (such a one however as I have great reason to be thankful for) of my symptoms; at all events, I believe, I must now expect, even in the course of nature, to be more and more weakened, by the recurrences of my constitutional indisposition; but if Providence be pleased to make the decline tolerable, and enable me to 'grow wiser and better as life wears away,' I shall on the whole of the account, be infinitely indebted to the Divine goodness.

" I have read your charge with attention; and it certainly has afforded me very real and cordial pleasure. The topics are all highly important; and you treat them with forcible plainness, and an honesty of purpose, which cannot be misconstrued. I am not sure whether you could have taken any safer or more useful line, considering whom you had to address (so necessarily deficient in precognita) and how short a time you have been amongst them. As to the earlier topics, three things strike me, which perhaps might have been usefully adverted to; but even these, at least the first two, may possibly be put forward with more advantage hereafter; when, from personal conversations, a few, at least, may have become qualified to expound, and it may be hoped, inclined to enforce, your official suggestions.

" My first desideratum is, that, in the fifth page, you should have more

explicitly represented the spirit of Christianity itself, as the primary element, out of which the spirit of the Christian priesthood is to be sublimated. I conceive that a very brief preliminary observation to this purport, would have added strength as well as clearness, to the just definition of the spirit of the Christian priesthood, which you proceeded to give. But you will think of it.

"My second desideratum is, that you had, about your seventh page, urged, expressly, the studying the original text of the New Testament. I am aware that you did this by implication, p. 16th. But it is so very important a matter, as to deserve both explanation and enforcement. I say explanation, for I suppose it is seldom adverted to, that no book in the world suffers so much in translation, as the New Testament. The terms being so often, in great measure, untranslatable, and those, the very terms of inspiration. But, as I said, I by no means lament that this point (in which I am confident of your agreeing with me) should remain in reserve.

"My third desideratum, I mention more doubtingly, because the matter to which it refers, might, in the present state of the south, be rarely practicable. This is that of psalmody, a few persons, who might be found capable and willing, should be taught to accompany, or perhaps rather supersede the clerk. Some clergymen could not do this, nor even perhaps procure means of having it done. But others could, or their ladies could. I confess myself no admirer of the whole congregation making an effort to sing, indocti doctique. But the drawling of a solitary clerk, is, if possible, a worse extreme. The medium of a few, taught in some measure to sing, and the rest listening, appears to me to be in the appropriate spirit of the Church of England, as akin to choir-singing, while the congeniality of congregational singing, rebuc sic stantibus, is at least disputable. But be this point ever so well worth attention, it may probably be better propounded in some other way, than in your first charge. Festina lentè, is a capital maxim.

"I cannot, at this moment, recollect a single particular urged by you, which was not necessary. What you insist upon, respecting the decorum of public worship, I cordially agree with.

"I cannot express the pleasure afforded me, by what you said p. 42., &c. The spirit which that part of the charge breathes, and the honest testimony which it so distinctly and manifestly bears to the R. C. clergy, is, I might almost say, delightful to me. The disposition manifested by so many, to allow them no credit for any thing, to charge them with invidiousness, and to represent them as secretly fomenting conspiracy in its bloodiest aspect, has been long, to me, a matter of deep regret, and not a little alarm.

"For I have thought, if these men are at length made actually disloyal, by those harsh and implacable accusations of disloyalty, what will be the state of the country? For averting this calamity, I cannot conceive anything more promising, than your coming forward, as you have done, to bear witness to their exertions; and to press the taking of them as allies, rather than the treating them as enemies, The line you draw, between conciliation and compromise, was indispensable. But had I been beside you, when you were drawing up your charge, I should have suggested, in one part, a somewhat different wording; instead of saying, 'that faith, which we are persuaded is the faith of the true catholic and

apostolic church,' I think I should have said, 'what we conscientiously regard, as the unadulterated faith and piety of the one catholic and apostolic church, in its best and purest times.' I mean, for the purpose of showing more clearly, that no difference in the essence of Christian faith was intimated, between them and us; but that our charge against them was of that addition and admixture, which, though not actually destroying the vitality of faith, yet, in our conscientious judgment, has deeply impeded its influence, and dimmed its brightness. On this point, I persuade myself you and I have the same view; and I think you will agree with me, that, especially in this season of growing infidelity, (I have just been reading, and have not yet finished, the article on this subject in the last Quarterly Review, which I doubt not is Southey's) it is as urgent a duty to recognize generical agreements, as it is, uncompromisingly to maintain specifical differences. And I presume that just attention to the former duty, would, in some measure, smooth the way to that co-operation, in preserving 'good morals, good order, and public tranquillity,' which you have so happily recommended.

"I certainly never was less sanguine in my hope, of seeing Christian charity toward us, widely diffused among the R. C.'s, than I am at present. Yet, even now, individuals may be softened; persevering liberality, in the true Christian sense, (Rom. xiv. 1, &c.) will be always gaining ground; while, as I already intimated, it may be a wise measure against infidels, who triumph so much in our disunion, to show, by word and deed, that the church of England does not 'forsake and reject' the R. C. churches, 'in all things which they hold and practise; but have departed from them, in those particular points only, wherein they were fallen, both from themselves, in their ancient integrity, and from the apostolic churches, which were their first founders."

For nearly seven years previous to his death, Dr. Jebb suffered under a violent seizure, which compelled him to withdraw from the active duties of his See, and to reside in this country for the benefit of medical assistance. During his residence in England, he made a tour through the principal counties, and in his letters to Mr. Knox, he gives a description of them, and of the most remarkable edifices they contain. These letters are extremely interesting, and the public are greatly indebted to the Rev. Editor for the pleasure he has afforded them, in enabling them to peruse a correspondence, from which so much may be learned. It is a work which ought to be in the hands of every clergyman, for there they will find maxims laid down, both as regards their ministerial functions, and the regulation of their conduct.

NOTICES.

ART. XIII.—*The Affinities of Plants with Man and Animals, their Analogies and Associations: A lecture delivered before the Worcestershire Natural History Society.* By Edwin Lees. London: William Edwards. 1834.

THIS is one of the first of a series of lectures delivered before the Worcestershire Natural History Society. We feel great pleasure in being enabled to congratulate our Worcestershire friends on the zeal they appear to show, in obtaining a knowledge of the Natural resources of their county; a county which probably possesses more of that kind than any other in the kingdom: and the Society in the possession of so efficient a member as the gentleman who delivered the lecture before us.

In his preface the lecturer informs us, that it was at first the intention of the Society to permit only their own members to be present at the lectures; but more enlarged views at length prevailing, the lectures became entirely open to the public, in order to interest them in the cause of their pursuit. We are glad that the Society showed their good sense in coming to such a conclusion. A knowledge of Natural History is more or less incumbent on all classes, and we think it the duty of those who have the power of facilitating the acquisition of this knowledge, to throw it open to the public. An attention to the works of Nature is forced upon man in his primitive or savage state; but it is a curious fact, that in his progress towards civilization, he learns to despise Natural History; and it is only when he approaches the highest degree of development, of which his nature is susceptible, that he returns again to its study with ardent intensity. In the first instance, impelled by mere necessity, food and raiment are his objects, and he learns to trace the beasts of the forest with a surprising sagacity; his arrows pierce the feathered tenants of the woods, and his devices ensnare the finny inhabitants of the ocean. But the scene becomes changed with him, as he advances towards civilization; he then leaves to the hunter the slaughter of wild beasts, he exchanges the skin of the ferocious tiger for a garb of cotton or woollen cloth, and leaves the wilderness for the populous town, and the placid serenity of the country for the strife and bustle of trade. The charms of Nature are despised in this state of society, because it is forgotten that to her bounteous hand all things are due; the citizen finds all his wants supplied, and contemns the explorers of Nature as searchers of unprofitable things. But as man advances towards the highest degree of civilization to which he is susceptible, his original affinities again appear. Commerce has brought him articles of curiosity and natural history, and his desire after wealth being now satiated, a fresh one, a love of the knowledge of nobler purposes arises in him, which curiosity and science unite in gratifying. And to increase the stores of this knowledge, men of known talent risk their lives; precipitous mountains are scaled, volcanoes searched, the regions of eternal ice, together with the burning tropics, are forced to yield their secrets; the depths of the ocean are

visited, and animals and plants are collected from every region of the earth. Nature is not cultivated for her own sake, and societies formed for this purpose, with general delight and approbation. In his lecture Mr. Lees considers—

1st. The more particular affinities, analogies, and associations of man, with plants; and

2nd. Those of the animal tribes. And he descends in a regular degradation from the most perfect specimen of creative wisdom, along the successive links of the most curious chain, until he approaches that dubious zoophytic boundary, where sensation and perception are so blended with apparent vegetation, that it is difficult to determine where the vegetable ends, and the animal begins. He regards vegetables as the clothing of the earth, without which it would be rugged, savage, and unsightly; and the colour chosen for its general robe as peculiarly appropriate, since the eye is never tired with the ceaseless changing hue which a perennial verdure presents. A world without plants would be a world of horror! we should shrink from its solitude with fear and dismay. Of birds and fishes there would be but few, and those of the most degraded kind, because there would be nothing to sustain them, and the existence of the human species would be entirely out of the question; carnivorous animals and poisonous reptiles might exist for a time, but in a short space the world would become an immense expanse of wilderness. But when we turn to the vegetable tribes, a delightful picture presents itself, which charms us by its elegance, and enchants us by its glow of colour.

Mr. Lees gives a very interesting account of many trees renowned for their size and beauty; as likewise details on other vegetable productions which are most interesting. He appears to be a votary of the muses, as he gives a quotation from them whenever he has an opportunity; which, although in a scientific work might be blameable, gives great interest to a pamphlet intended for the perusal of the public in general.

ART. XIV.—*Outline of the Geology of the Neighbourhood of Cheltenham.* By RODERICK IMPEY MURCHISON, F.R.S. London: Murray. Cheltenham: Davies. 1834.

THE public, and more especially the inhabitants of Cheltenham, must feel highly indebted to Mr. Murchison for his very interesting little work, entitled "Outline of the Geology of the Neighbourhood of Cheltenham." It is altogether surprising that attention should not long since have been paid to this subject, in a place to which thousands annually resort for their pleasure and amusement. The great use that must result from such an examination cannot but be felt by every one, as affording a great source of knowledge and amusement. The important uses of Geology, in explaining the true arrangement of the strata which constitute the mineral crust of the earth are now generally known, and the subject is consequently becoming every day popular. Rocks stand in the same ratio with the Geologist as Papyri do with the Antiquary, imparting to each one who diligently searches into them, the history of ages gone by. But although this is an undeniable fact, Geology has been doomed to undergo a persecution, not less severe than that inflicted on the early astronomers; but the Geologist has the consolation of knowing that his delightful science has been assailed by those only who are ignorant of the results arising from its study; and whilst they assert that it is calculated to

undermine religious belief, would see, were they to study it in a proper manner, that the mind of every practical Geologist is replete with multitudes of facts, calculated not only to demonstrate the power and wisdom of the Creator, but to show in the clearest certain beneficent arrangements, by which his ends of his providence have been accomplished, and by which the surface we now inhabit has been fashioned to become a fitting abode for us.

The author of this very interesting little work observes, that the time is now fast approaching, when every populous district in the kingdom will possess some work explanatory of the structure of its subsoil and rocks. We perfectly agree with him, and feel convinced that were each district possessed of an Impey Murchison, this would ere long be accomplished.

ART. XV. — *Jephtha's Daughter; A Dramatic Poem.* By M. J. CHAPMAN, Esq. London: Fraser. 1834.

THIS is an interesting little poem, founded on the 11th chapter of the book of Judges, in which Miriam, the daughter of Jephtha, is related to have been sacrificed according to a vow made by her father, that "If the Lord would deliver the children of Ammon into his hands, he would offer to him as a burnt-offering the first person who should come forth from his doors to meet him, after his victory over the Ammonites." The poem opens with a colloquy between Miriam and her Nurse; and goes on to describe that Jephtha being chosen judge, is then absent from home giving battle to the children of Ammon, the Spirit of the Lord comes upon him, and he is thus pointed out as the instrument of the deliverance of his people. He makes the vow above-mentioned, the battle takes place, and he is victorious; he returns home, and the first to come forth to meet him is his daughter, who thus becomes the victim of his vow. She is not disheartened, but professes herself willing to be sacrificed for her father and her people. The nurse and a chorus remain on the place to utter mingled lamentations and thanksgivings, and the scene closes by the chorus chanting a hymn in honor of the virgin-victim. The author has displayed a great power for description in this little poem, which is highly worthy the perusal of the lovers of the Muses.

MISCELLANEOUS INTELLIGENCE.

CAFFRARIAN ORATORY.—The Caffre chiefs are, in all cases, both Legislators and Judges, while the "old men and favourite courtiers" form a kind of jury and council too. The parties appear personally, plead their own cause, and produce their own witnesses and proofs. In their public harangues a man is seldom interrupted, although his speech be continued for four hours together; but during this time his antagonist is all attention. When he rises to reply, every argument that has been adduced is taken up, in the exact order in which it was delivered, and with as much precision as if answered at the very moment. Memory is their only note book: and although apparently put, on many occasions to the severest test, they seldom seem to labour under any material difficulty in bringing up all the details of the subject, by the astonishing power of recollection. Their language on those occasions is generally strong and nervous, and their manner exceedingly manly and dignified. Even the children, when about to reply to the most simple questions, step forward, throw back the head, and extend the arm, and give to their words, a full, slow, and clear enunciation.

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